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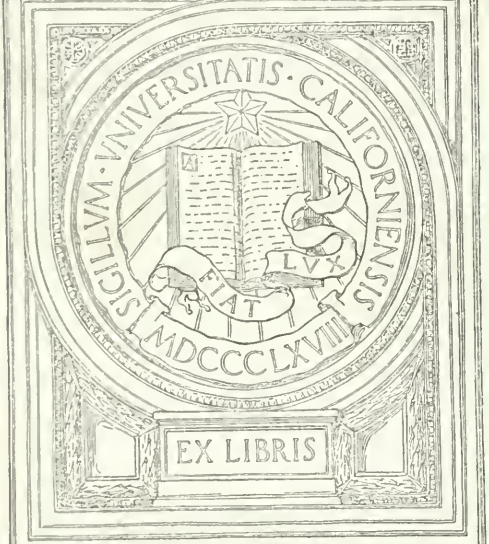

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MONETARY AND INDUSTRIAL FALLACIES.

A Dialogue.

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PREFACE.

THE following dialogue was intended to form part of a work entitled The Political Economy of Great Britain, the United States, and France, in the Use of Money: A New Science of Production and Exchange. As it would swell the book to too great a size for convenience, it is published separately. To some minds this form of arguing economical and monetary questions may be more agreeable than a didactic and formal one; and besides this, a comparison with prevailing opinions can be carried along at the same time. New ideas are thus presented in the most forcible manner possible, and those who offer them have some opportunity of being heard, by being found in company with those who can argue in favor of the old ideas. The dialogue introduces a skilled workman who is in search of work, who thinks the national banks ought to be immediately wound up because they are making money scarce, and their notes replaced by government issues. Absurd as this scheme really is, and as it certainly appears to most men who have any knowledge of practical affairs, some business men, thousands of laborers, skilled and unskilled, and some men who are well known as writers upon economical questions, support it. The minds of ignorant, and, in many instances, vicious, as well as ignorant men, are being filled with false ideas by traveling lecturers and speakers, in some parts of the United States, and there is no organized effort to counteract it. The spirit of destructiveness and Communism is attracted very naturally by such arguments, and the result may be the prostration of industry and commerce for years, by the indefinite postponement of a return to convertibility of bank

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and government debt now used as money. The dialogue introduces a writer who favors a government currency convertible into funded debt, the latter being reconvertible into currency at the pleasure of the holder. How the government is to loan this currency without turning banker, this writer and his brethren are unable to say, because they have not thought about that. The dialogue introduces also a writer of the prevailing school of economists, who thinks bank credits are likely to liberate gold from banking reserves, until finally, as "clearings" are extended from time to time, the gold required for reserve becomes a mere trifle, and that metal as well as silver is largely exported and sold, for use in barbarous or half-civilized countries. The same writer insists that there cannot be such a thing as overproduction, and that a banking, commercial, and industrial crisis is merely a matter of "over-trading" and "speculation." These economists argue their own case together when they agree, and when they do not, each for himself, in opposition to a banker who has adopted the ideas maintained in the book above referred to. This banker insists that all money is substantially one and the same thing, — a process for the exchange and distribution of the products of labor; that gold and silver are the most perfect form and kind of money, and that for all ratios of valuation and all equations of exchange between buyers and sellers, in order to have the true and real benefit which gold and silver are able to confer, a definite portion on short averages, of units of gold or silver, ought to form a part of the total number of units of money (whether units of bank or government debt constitute the remainder) in every ratio and equation. This result is obtained by a metallic reserve, varying in short periods only, from a definite ratio to bank-loans. This banker maintains the proposition that while natural inequalities of condition and of ability are essential to the progress of society and even to civilization, because without them there could be no loans and therefore no production on credit, yet by the uncertain degrees of economy of gold and silver, which a constantly variable banking reserve implies, production on

credit is carried to such an excess as to bring about periodically crises which appear in banks, in commerce and in industry. Hence the attempt to establish a bank-note currency by the Act of 1844, in England, "varying as gold would vary," was utterly futile, because Adam Smith's law in respect to bank-notes, — that they ought not to exceed in volume the metal they displace, — is equally applicable to all bank loans. The non-perception of this law, as equally applicable to the loans of all banks, and it may be the impossibility of carrying it out in respect to deposit-loan banks, have caused England and the United States much loss and suffering. Production is subject to a law which is paramount to money, — the necessity of exchanging the products of labor. The coinage of silver is also incidentally discussed. A conservative banker is introduced, who believes in the doctrines of the economists of the day, but is ready to hear all sides, and anxious to learn the truth.

MONETARY AND INDUSTRIAL FALLACIES.

In the following dialogue the speakers are a skilled laborer, a banker of the old school of opinion in relation to deposit and deposit loans, metallic and convertible paper, money, etc., a writer of the same school, a writer on Political Economy who maintains with the skilled laborer that what is needed for the country is more money, and a banker who has, after careful examination, adopted the opinions maintained in this book. The skilled laborer I designate by the initials S. L.; the banker of the old school of opinion by the initials O. S. B.; the political economist of the same old school by O. P. E.; the writer, who favors more money, and also the "convertible-bond" currency scheme by C. B. C.; and the banker of the new school of opinion maintained in this book by the initials N. S. B.

S. L., O. S. B., and N. S. B. meet each other casually and open the dialogue:—

S. L. I am out of employment, gentlemen; my occupation is that of steam-engine maker; can you direct me to a place where I can get work?

O. S. B. That work is said to be overdone. I do not believe it, although I know of no place where it can be had. Good workmen can always get work: there is an abundance of everything: the land is teeming with wealth and granaries are bursting. You certainly ought to be able to get work.

S. L. All you say may be true, but nevertheless I have spent much time in trying to get the work, which you say is so easy to be had, and have not succeeded, although I

believe myself to be a fair workman. Rather than wait any longer for the work I know how to do, I am willing to try my hand at any kind which will furnish me board and clothes. If the government would only issue more greenbacks, or coin plenty of silver and set us laboring men at work, it would be a great blessing: there would be joy among all the idle boiler, steam-engine, brass-plate and iron rail and bar makers, as well as all the miners and smelters in the land.

O. S. B. Your greenbacks would not help you, if they were issued, and your silver would only cause inflation. It would also be an act of repudiation on the part of the general government: it has no right to issue cheap money to pay debts with.

N. S. B. You are right, Mr. O. S. B., in saying that an issue of greenbacks would help nobody, but you are wrong about silver. It is highly inexpedient, I admit, for the general government to coin at this time any more silver than will be needed for subsidiary use on a return to specie payments, and the amount that will be needed for that purpose will depend upon the exclusion or non-exclusion of small notes: small notes would be well enough, if a proper banking reserve were always kept. In Great Britain, in consequence of the exclusion of notes below five pounds and the absence of all gold coins below the half-sovereign, a much larger amount of silver, in proportion to the whole, is required in the circulation than has been the case with us. What is called the silver question in the United States has now no practical importance whatever. While, however, it has no practical, it is in point of science of the very highest importance, because it shows so clearly the absence of all true science in the mercantile theory of money, which has been universally maintained hitherto. The question has no practical importance, because it is impossible to coin enough silver, at any ratio, to drive out gold entirely before convertibility of government and bank debt is restored; and after return to convertibility, until gold is driven out, all silver and gold dollars and multiples of gold dollars must exchange

at par or at least very near par. So long as gold remains it will be the "Standard," because there will be a standard impossibility of expelling it until there is silver enough to take its place. It would require more than double the mint power we have to coin silver enough to drive out the gold, even if holders of bullion would bring it to the mint as soon as we should need it, to redeem with, and then nothing but free coinage of all silver bullion brought to the mint for that purpose, or the purchase at market rates and coinage on the part of government of all the silver offered for sale, could have the effect of expelling gold. Such a coinage need not be expected, if authorized, until after a return to convertibility under gold, because silver would probably rise too rapidly to allow it to take place. After a return to convertibility under gold, moreover, it will become manifest to all that the United States ought to adhere to gold until a general monetization of both silver and gold can be agreed upon, so as to make the barter rate between them stable.

O. S. B. What do you mean by the barter rate between gold and silver?

N. S. B. I mean that gold and silver bullion are, as bullion, commodities, or, as one might say, merchandise; but as money, they are not. They are, even as money, it is true, material substances designed for use; but for all practical purposes they are not commodities in the sense in which other things so called are such, and therefore I plainly and honestly say so, because for me Political Economy is not a science of abstractions: I aim to make it practical, so far as I have anything to say about it. All money, when used, whether paper or metal, necessarily resolves itself into a series of abstract units, limited in number by the metal or the paper to be had, and by the metal and paper actually used, and localized by the paper or the metal; but in order that they may be limited as well as localized by the metal and paper employed for that purpose, it is essential, while other commodities *can* be used without, that the metal be divided into pieces by weight or measure, and if not so divided, it is essential that they be weighed or measured, not for the

purpose of ascertaining the quantity of metal with a view to actual use, but the number of standard units of purchasing powers the metal can furnish. Wheat is measured by units to find quantity; gold is measured by quantity to find units. If the precious metals were to be put to ordinary use, intrinsic qualities would, together with annual product and the relative demand, determine their barter value as reckoned in each other, like iron and copper. But because the principal and controlling demand for them is to coin them into money, their barter relation, as metals, is controlled by that demand and that use. Hence, if silver and gold were produced in equal quantities in any one year, — say fifty millions each, — and the next, silver to the amount of seventy-five millions, and gold to the amount of only twenty-five millions, should be produced, the price would not be determined by relative demand and relative mass of product in either year; and if there were five thousand millions of coin in the shape of silver, and five thousand millions in the shape of gold, the first year, and enough of the whole metallic product went into manufacture, as on the average it always does, after allowing for differences in the amount of commerce accomplished with each metal, to keep two thirds of the existing total of each in coin, and one third in commodity, the ratio of each metal produced for coinage the first year, to the previously existing total of coin, would be the same for both metals, — that is to say, — two thirds of one per cent. Aside from any intervening increase or decrease of commerce, the metallic mass in coin of each metal might, in consequence, be said to depreciate in respect to the purchasing power of each coin in it, two thirds of one per cent., after the lapse of time sufficient to distribute the increase equally where commerce had gradually distributed the total coin in time past. But in the following year the ratios of production and of quantities ready for ordinary manufacturing and coinage would change: that of silver would increase to one per cent., and that of gold decrease to one third of one per cent. of its total mass. Now, because all the money of the world, including gold and silver as well as paper, can, speaking practically

— that is to say, according to the actual fact — be nothing more or less than a series of valuing, purchasing, and paying units, if gold and silver were equally distributed throughout, and the only money of the commercial world, the constant tendency would be to an equal division of purchasing power between them. This equal division would naturally result, because the use of the two metals as money everywhere and equally, would tend to that result; and in order to effect this division, such a disposition of the metals as I have named must take place. The result is still attained, approximately, subject to two causes of deviation: 1st, actual deviation from equal division of commerce between the two metals, — one metal being used in some countries as standard, and the other in others; 2d, "economy" of the metals, when used as money: this economy produces a very unequal distribution. Subject to these causes of deviation, the tendency continues, and the same result follows. The product of silver, the second year, before referred to, is to that of gold as 3 to 1: the previous year it was as 1 to 1. Were gold and silver, when used as money, like other commodities, this variation in the relative product would cause a great variation in relative values, but the variation is actually confined to the difference between the ratios of product to mass.

O. S. B. How do you know this to be a fact; and if you know it to be so, how do you account for it? The impression of holders of United States consols, as well as bankers in Europe and the United States, has been, and still is, that great loss would be inflicted upon all who hold debts against the citizens or the government, by what we call the remonetization of silver, whether the coinage be limited or not. So much silver would be thrown upon the market that it would become cheap, and there would be an inflation.

S. L. That is exactly what we need to make good times, and set everybody at work again. Plenty of money will give plenty of wages, if I can reason at all, and make good prices for everything; but I see C. B. C. coming, the great economist, who believes, as I do (for I have read some

of his writings), that the banks are a monetary nuisance because they will not lend, and yet they have the privilege of issuing their own money without paying anything for it. He has written in favor of what is called Convertible-Bond Currency, to be issued by the general government, in order to make money as plenty as possible. I believe his idea is that when this money is too plenty, bonds will be scarce; and when it is too dear, and hard to get, bonds will be plenty: one will regulate the other, like the different parts of a steam-engine.

O. S. B. But suppose you get on too much steam?

S. L. Mr. C. B. C. will explain it all to you.

O. S. B. I suppose he will; but O. P. E., the celebrated writer on the Old Political Economy, is also coming from the same direction, and we will set the old political economy that opposes, against the old political economy that favors, the theory of convertible-bond currency, and let one mend the other.

N. S. B. It looks as if both were in need of mending, when writers upon political economy differ upon such a question. The science of political economy is that of production and exchange. The principal exchange, if there were no money, would be made directly by bartering one thing for another: to make the exchanges of civilized men, and indeed of some savages, an auxiliary exchange is required. Units of merchandise are continually exchanged for units of money. Units of merchandise are limited in general by the power to produce, as well as by the power to consume them: all merchandise is measured by units; it cannot possibly be measured in any other way. The power of every man to produce being limited independently of his power to exchange and consume, his income is not only limited by his own power to produce himself, but by the productive powers of those (the whole world) who exchange with him. The power of producing is, therefore, on the average, subordinate to the power of exchanging on the average. Hence, it is certain that harmony of production is essential to harmony of consumption: excess in any quarter is the result of mis-

applied energy. The constant tendency must, it is true, be to an average: but although all human movement, as action and reaction, results in average harmony as a whole, excess and defect are always found now and then, and here and there, in time and place. It is the absence of everything practical in what is called Political Economy, — the assumption that an abstract average is one that appears in the shape of an every-day verity, — in the market, the shop, and the store, which will demonstrate by a *reductio ad absurdum* the falsity of every argument, that old political economy opposing, can bring against old political economy sustaining, — the theory of convertible-bond currency. Inasmuch as O. P. E., as well as C. B. C., both believe and maintain that there can be no overproduction in any quarter (not even in relative necessaries), no production of any kind can be stimulated too much, and for the same reason there cannot be too much money loaned or paid out for labor anywhere. There being no overproduction, every man sells all he produces, and pays his debts to banks and bill and note brokers regularly; and as Adam Smith testifies of the Scotch banks of issue of his time, the pond called the reserve is kept at an even average, through the equality of volume of the exhausting and supplying streams. This equality results from equality in volume of the daily real exchanges which support labor and capital within short averages: there being perfect harmony in the principal, there must be a resulting harmony in the auxiliary exchange. Upon this theory, if true, the more money actually loaned, the better; but let us hear what O. P. E. and C. B. C. have to say.

S. L. I am glad to hear you say so much in favor of Mr. C. B. C.'s great arguments.

N. S. B. You are mistaken: I think *his* arguments quite absurd; but inasmuch as he honestly believes that there can be no overproduction, he is logical in maintaining that production of all kinds ought to be stimulated to the highest degree by loaning as much money as possible. At the same time, Mr. O. P. E. affirms, likewise, in his book, that there can be no overproduction, and cites the writers who have

preceded him as proof. C. B. C., therefore, has the advantage; but do not misunderstand me: what I affirm, and all that I affirm in respect to the coming dispute between O. P. E. and C. B. C. is, that the former is *estopped* from controverting C. B. C.'s absurd scheme, and will continue to be estopped, until he gives up M. J. B. Say's theory of production, and learns fully the lesson of the conventional and credit character of all money.

S. L. You are getting too high for me. Here is Mr. C. B. C., who can understand you better than I do. I must leave in search of work.

O. S. B. I must also leave: here is Mr. O. P. E., who will take my place and answer you, Mr. N. S. B., as well as C. B. C. himself. He will do it better than I can.

C. B. C. Good morning, Mr. O. P. E.: what question were you and Mr. O. S. B. discussing? You and I are old acquaintances, but I have not had the pleasure of an introduction to Mr. N. S. B. before. Mr. O. S. B. I have known for a long time.

O. P. E. I have just come, like yourself. I, like you, have just made the acquaintance, by a formal introduction only, of Mr. N. S. B. He is the only one here to answer your question.

N. S. B. We were discussing the question of money. I was endeavoring to show that all money, including gold and silver, must be taken out of the category of ordinary commodities, if we desire to understand its true nature and use, and until these are understood, it is but irony to talk about the science of political economy even as respects the production and exchange of the whole commercial world; still less as respects the industry and commerce of such nations as Great Britain and the United States.

O. P. E. Money is money, and credit is credit, without any particular reference to the time when, or the place where, they are used; so of industry and commerce.

C. B. C. You are right there, Mr. O. P. E., although I differ from you very much as to the quantity of money American producers need, and also the quantity of protec-

tion they ought to have. I want to give them abundance of each, but you would deprive them of both. As to Mr. N. S. B., he seems to have new opinions of some kind, and I am inclined to think he must agree with me, for American industry certainly ought to be sustained in preference to British, and how can you do it, without a discriminating tax imposed upon British goods sent here by foreign, or imported by American merchants? That end accomplished, you must furnish the American manufacturer abundance of money so that he can set all the now idle hands at work. If we had been so fortunate as to have had a finance minister of my opinions in 1869 instead of that old-fashioned banker Mr. McCulloch, who nearly ruined American industry by a contraction as powerful as the hug of the great Russian bear, there would not have been a single furnace closed, nor could there have been a single hand idle.

O. P. E. There is some poetry in your political economy, at least, Mr. C. B. C. You have been talking about two things in respect to which we disagree. You believe in protection: I scout it as a practical absurdity: you believe money is not plenty enough; I believe it is too plenty. You believe, as I do not, that the general government ought to issue more currency, with a convertible bond, and thus get rid of the banks. When money becomes too plenty, at those seasons when but little is needed, you would allow the holders to exchange it for bonds, and when more money is needed you would allow bond-holders to exchange the bonds for currency. The general government would then pay interest on deposits instead of the banks, with this resulting benefit, as you call it, to tax-payers; that is to say, the country at large: the general government would pay interest gratuitously, whereas banks are compensated by the use of the money deposited. On the other hand, while you and I differ upon these two subjects, we agree entirely upon two others. You believe, as I do, that there is not and cannot be such a thing as overproduction. You carry the doctrine a little further than I do, perhaps, because facts compel me to admit that there has been and still is a glut of some particular

commodities, although there is no such thing as overproduction. If any man pretends to assert that there is or can be such a thing, after reading M. J. B. Say's demonstration to the contrary, and pretends to bring forward facts to prove his assertion, so much the worse for his pretended facts. All the world cannot make me believe that there are any facts, when rightly understood, to maintain such an assertion, for M. Say's demonstration proves in advance that there can be no such facts. The other thing that you and I agree about, Mr. C. B. C., is money, with the exception, perhaps, of silver. We agree as to what money is, but you are in favor of silver coinage, if you can't have the convertible-bond currency; I am opposed to it, for the same reason that you favor it. We both agree that it will make money more plenty, but I call it a silver inflation; you call it a greater abundance of money.

C. B. C. I am in favor of silver, certainly, if I can't have the convertible-bond currency. That currency would nerve the hand of labor, annihilate the odious tyranny of bank capital, and bring again prosperity, which we have not seen since that terrible contraction of Mr. McCulloch in 1869; but if we can't get that boon, let us make money as plenty as possible by coining silver.

O. P. E. I can't agree with you about silver. I must confess it shocks me to think of the inflation the coinage of silver and making it the standard would cause. It is a drug now by the side of our inconvertible paper, although it is almost a year before the time fixed for specie payments. You think there can't be too much currency. I think there can, and I believe that the immense issues of inconvertible promises, unfulfilled as those promises have been, caused the speculative era which culminated in 1873. It was speculation, not overproduction. When paper promises are convertible into actual commodities in the shape of gold dollars, there is no room for speculation by the aid of paper currency: all the speculation which then takes place comes from credit. It makes no difference what the credit is, whether bank, mercantile, or any other form of credit.

Checks, promissory notes, bills of exchange, credits and debits on merchants' books and bank books, are all one and the same thing. There is only one kind of credit: it is ridiculous to make any distinctions. All the great transactions of commerce, national as well as international, are conducted by means of credit; and as nothing but credit is used, it is simply barter. If gold is paid out, — for we must now exclude silver, — it is a case of barter of one commodity for another commodity, although, in order to get the article he wants, the man who gets the gold must barter it for that article. This makes double barter where gold is used, and single barter where bank or any other kind of credit is used. There can be no speculation through the use of gold or convertible notes, for these are employed, for the most part, in retail transactions; but when it comes to the wholesale, which precede the retail transactions, then comes speculation, and its sequence, unproductive investment.

C. B. C. I suppose you are right about commodity, barter, double barter, and speculation. Your political economy and mine are alike respecting these topics, but, for some reason or other, we don't exactly agree about industry and production. We both say that there can be no overproduction, and I will not admit for a single moment, although every granary is bursting, that there can be even a glut; but you are not willing to make money plenty, so that all men can work. It seems to me, you are not consistent, but possibly there may be some way to explain the apparent inconsistency. I think it must lie in this, that you think laborers would get a promise of a commodity in the shape of gold when they receive convertible notes for their work, but only credit, when they get inconvertible notes. There may be something in that, but I am in favor of the notes, because I know the laborers will be glad to get them. What say you, Mr. N. S. B.?

N. S. B. I am charmed with everything I have heard on both sides. I have heard it many times before, I admit, but I never heard the same subjects treated so logically. Each

particular remark was the logical sequence of the one preceding it. Nevertheless, I differ from you in your premises. Money is not a commodity in the ordinary sense of that word, because as money, its value is conventional: its value lies not in itself, but in what it exchanges for. Were it, even in the shape of gold, an ordinary commodity, then, undoubtedly, an exchange of a load of forty bushels of wheat by a farmer for five gold eagles would be a barter of the wheat for the gold eagles; and when the farmer exchanged the eagles for his half-season's supply of dry goods and groceries, he would barter the former precisely as he would a cow, for the latter, and thus Mr. O. P. E.'s assertion would be literally true. I have no doubt his premises are false by reason of not containing the whole truth, but his argument is remarkably clear. If his premises were true, he would also be right in respect to silver. If silver were used only as an ordinary commodity for manufacture, like copper or platina, the quantities put upon the market — demand remaining the same — would alone determine its exchangeable value as a commodity; but the value of silver as well as gold, in its character of money, depends upon the total already existing as money, and the ratio of the quantity placed upon the market through production and demonetization to the total existing as money in the shape of coin after the demonetizations have had their full effect. Thus the abandonment of free coinage of silver in Germany and the Latin Union, and the restriction of its coinage there in future to subsidiary uses, will ultimately diminish the whole mass of silver coin in those countries, by the difference between the mass as it was or would be under free coinage and the mass as it will be under subsidiary coinage. The mass of the latter will depend very much upon the size of the smallest unit of paper money or gold. Suppose the mass to be reduced ultimately in those countries seventy-five and in the commercial world ten per cent.; this would change the ratio of all the silver going into coin by one tenth approximately, if the miners of silver continued to mine as they would have done had the mass of silver coin not been reduced by one

tenth. If they continued so to mine, a proportionately larger quantity of silver than before the demonetizations — that is to say, one tenth of all that had gone into coinage before — would go into manufacture after the demonetizations. This would actually be the ultimate effect, assuming production to continue as before; but it would not. It would fall off. Silver would rise as its production fell, and gold would rise also. These changes would be so slow, however, that nobody would know when they were taking place. Meantime should the United States remonetize silver freely after a return to convertibility, — for it is useless to attempt it before that time, — a coinage at the rate of sixteen pounds of silver for one of gold, while driving out all the gold, would probably carry silver bullion up, so that sixteen and one half pounds of silver would be worth one pound of gold in London, leaving the United States rate only three per cent. short of the London rate. There is no inflation, but only great folly in this plan.

O. P. E. How do you account for silver being a drug now?

N. S. B. Upon the same principle by which I account for the facts I have already, and many others which might be, stated. It is because the value of all money is conventional, and all money, even gold, necessarily resolves itself into a series of units whose purchasing power — in other words, exchangeable value — is inversely as the number employed to make a valuation precedent to purchase and payment. The whole mass of money existing is therefore in the shape of units, which is the first element of valuation; the second is ratio of daily, weekly, monthly, or yearly increment of units; the third, as between materials (the metals silver and gold) used to make the units, is actual quantity of each remaining for coinage after the demand of arts and manufactures is satisfied, without any regard whatever to the intrinsic qualities of the two metals, — *e. g.*, if silver and gold going into coinage were to change places in weight, values would change accordingly; the fourth is the number of units offered and actually paid for a fixed number of units of any particular

commodity at each sale, and the average resulting from all the sales. If silver coin is now a drug, it is either because there is more than enough for subsidiary uses, or because the government has been so improvident as to coin "trade dollars," or for both these reasons.

O. P. E. Can the ratio between gold and silver be fixed by law?

N. S. B. It can, undoubtedly. The United States fixed the conventional value of silver for free coinage in their mints at sixteen pounds of silver to one of gold. They put it lower by half a pound for every thirty-one half-pounds than the European mints had put it. The result was, that there was a profit in sending off all the silver coin in the United States and bringing back gold to be coined in our mints to take its place in the circulation. Here is a fact, if you will only allow yourself to give it due weight, which, for all practical purposes, must convince you that gold and silver, as money, have only conventional value — intrinsic qualities being discarded — with as much certainty as you can be convinced of anything. If the departing silver coin had been an ordinary commodity, no government could have fixed its value in relation to gold so as to make it profitable either to send it away or to keep it at home, for no government can fix the value of any commodity. Because it was not a commodity in the ordinary sense, and as money only a series of valuing, purchasing, and paying units, it went abroad precisely as Bank of England notes, if they were circulating in this country at a discount, would be sent hence to where they are at par. *For all practical purposes*, the Bank of England notes are just as much ordinary commodities, in the case supposed, as the silver, and it is for practical purposes only that the science of what is called Political Economy ought to be studied or taught. As an abstract science, I, for one, have no use for it. To understand the true uses of gold and silver in their character of money, you must give up the idea of commodity, and therefore end in itself, instead of means to an end only, barter and double barter.

C. B. C. Your remarks, Mr. N. S. B., are quite interest-

ing, and I consider them important, because they corroborate my opinions about labor and currency; for as we have not sufficient gold and silver to furnish us all the units we need, we must have paper, and I affirm my belief that we have not half enough.

O. P. E. He has hit your theory squarely, Mr. N. S. B. He and those who think with him have always said there was not enough of silver and gold to transact the business of the world, and that unless there could be enough furnished to supply everybody, paper must be resorted to in much larger amounts.

C. B. C. Precisely so, Mr. O. P. E.; you and I agree now. I always said, it is but mockery to assert, in reply to labor's demands, that we have gold and silver enough to answer our needs. There is a power in paper money, if we could only have enough of it. See what an enormous circulation, in gross and *per capita*, France has, compared with ours. It must have been more than double a few years ago, and even now it is much larger. We ought to have as much as France, and in fact a great deal more, because business is more active here. In fact, if I may use such a word, I might say we are starving, not for bread, but for currency. I am in favor of protecting American industry with plenty of currency as well as tariff. Of what use is tariff, when we are dying for want of currency?

O. P. E. You are out of my circle now, Mr. C. B. C., although we are both economists, and agree in the main point, that there can be no overproduction. When you abandon the theory that gold coin is a commodity, and the end in itself of all redemptions, you are at sea without rudder, chart, or compass. I must leave you to navigate for yourself.

N. S. B. Your remarks, gentlemen, are quite amusing to me. Mr. C. B. C. is willing to give up the commodity theory if he can only have currency enough; and Mr. O. P. E. thinks redemption of paper currency useless upon any other. I am, to use a hackneyed term, more conservative than either of you. Mr. C. B. C. thinks that money makes industry, and he thoughtlessly takes it for granted that industry alone

makes commerce, and commerce consumers. I say thoughtlessly, because careful observation and right reasoning would make him doubt the truth of those conclusions. Why should all the workers at trades in the United States be set to work, if all the product cannot be sold? But this question is not well put, because misleading. The proper question is: why waste breath in talking about setting more men at work, when it is impossible? C. B. C. seems to think there is more enterprise in money than in men; that money builds factories, furnaces, and mills, and makes iron and cloth; that money behind man, and not man behind money, is the actor. O. P. E. is right in objecting to the issue of more currency, and insisting by implication upon a speedy return to convertibility; but he is wholly unable, upon the commodity theory, to answer C. B. C.'s argument, that there is not and will not be enough gold in the United States to answer a quarter of the actual demand, and that we therefore need large supplies of good paper.

C. B. C. You are right there, or as some of our ready writers express it, there is not gold enough to supply us all, and therefore we need abundance of paper.

O. P. E. The commodity theory explains everything to my satisfaction. You say yourself, the power of producing is limited, and hence commodities are limited, — the commodity gold, especially: if paper promises are always convertible into such a commodity, there is a sound basis of commodity to sustain the superstructure of credit.

N. S. B. You are misled by a fallacy of words, and truth and fact demand in reply great plainness of speech. There is no meaning in your words whatever. Those who agree with you talk about gold as a measure of value. The expression is misleading, but I will assume it to be correct. If gold in banking reserve is a measure of value, as you yourself are estopped from denying, how can it measure the value of the commodities exchanged by means of the banking credit or debt — whichever term you choose — which is passing above it?

O. P. E. No writer affirms that it does measure the value

of the commodities exchanged by means of bank debt and credit, and customers' debt by bill and note. All the writers — myself included — say, that clearings take place without reference to banking reserve: it is only a set-off of debts, when reduced to its simplest terms. Some writers think there is more gold kept in the reserve than necessary; but I am in favor, until clearings are further extended, of a good reserve.

N. S. B. You think, therefore, the reserve ought to vary with the retail movements of merchandise only, and not in harmony with all the movements of commerce, wholesale as well as retail?

O. P. E. I have never troubled myself about those matters, except so far as to learn this one great truth, — that deposits arise from the sales of commodities. It is enough to know this. Gold is only wanted as a commodity, as people want wheat. What new theory have you about gold in the reserve?

N. S. B. I have a theory founded on all the facts of the case, and I have thus avoided the fallacy, founded on a few of the facts only, which has entrapped you and your friends. If credit answers the purpose of exchanging commodities by being substituted for one commodity, gold itself accomplishes no more. But the credit used is, while in the form of a book entry or a bank-note, but an abstract unit or series of units, and the gold for all practical purposes — and I regard these only — can be no more. Hence the true theory about gold in the reserve is, that its proper function is one of limitation of loans. If the reserve varies as bankers choose to make loans vary, then the reserve is limited by loans, instead of loans being limited by the reserve.

O. P. E. You are right: banking is an affair of credit entirely; no banker can do business without a variable reserve. His business varies, and his reserve must vary. Gold in banking reserve is only needed as the small change of commerce, as some writers say. I am more conservative than the rest of them, for I am in favor, for the present, of a good reserve. The most important function of gold in re-

serve is to supply retail trade, and occasionally redeem bank-notes: an excess of convertible notes is impossible.

N. S. B. Without knowing it, you have contradicted yourself three times. You say deposits arise from sales of commodities alone. If that is the case, bank loans, which create all the deposits to be found over and above reserve, are never used to pay for the labor that creates commodities, which is false, as you yourself will at once admit, because it is hardly possible for you to deny it. Again, commodities must be produced before they can be sold, and sales of merchandise cause an equal amount of production of merchandise to take place, while deposits are the registered cost of products, held in first, second, and to some extent third, or even fourth hands, which have not yet found consumers, — in other words, cash buyers. In the second place, you say merchandise at wholesale is paid for by units of bank credit, which are not controlled, and therefore expand and contract without reference to gold in the reserve. Hence, according to your first assertion, these units must be controlled in volume by the units of merchandise exchanged at wholesale and paid for through checks, set-off, and clearing. But this assertion is contrary to the fact, for the volume of deposits, which is the whole volume of credit and reserve units, is, as you now impliedly admit, determined by the volume of production as the controlling cause, and not by the sale of what is produced. The retail transactions of commerce are, as you say, made with gold, silver, and bank-notes, which are limited in volume by gold, and these retail transactions take place in a consumer's market. But it is absolutely impossible to sell by the gold standard at retail, and by the credit standard, uncontrolled by gold, at wholesale. This involves a practical absurdity on the money side, which is the auxiliary exchange. It is equally absurd on the side of the principal exchange, — that of merchandise; for the wholesale transactions are, as you admit, now regulated in volume by the production, and the retail by the consumption, of commodities. Therefore, as I said before, your remarks involve three contradictions. Because production is the source whence come the commodi-

ties sold at wholesale, and bank loans are used to pay for labor, or merchandise whose sale causes an equal amount of production to take place, deposits arise from production and not sales: which is the first contradiction. And if transactions at wholesale are made by payments in units of credit, without any limitation or regulation by the reserve, the retail transactions in consumers' markets must take place in the same manner as shown by the *reductio ad absurdum*, and yet you say they are regulated in volume by reserve: this is the second contradiction. In the next place, if, as you say, the volume of units in the retail transactions is regulated by reserve, that in the wholesale transactions must necessarily be, by the same *reductio ad absurdum;* but you affirm that it is not: this is the third contradiction. Here are three contradictions. I will dispose of them by facts. Production makes deposits; neither clearings nor any other banking transactions are regulated, as they ought to be, by the gold in the reserve, and hence retail transactions, accomplished largely by gold, silver, and bank-notes, which, as you say, move continually into and out of reserve, without any reference to wholesale transactions, and therefore production, must nevertheless necessarily be regulated in volume by that of the wholesale transactions which precede them. Therefore, the volume, not of gold and bank-notes, but of the *circulation* of gold and bank-notes used in retail transactions, as well as wholesale, must be regulated by the volume of commodities produced, and not the volume of commodities consumed. The expansion of circulation, even of gold, is regulated by the labor it buys, and not the commodities that labor sells. Hence the steadiness of prices and check to expansion which are sought through convertibility must be lost in some way by means of deposit and discount banking.

C. B. C. You have fairly demonstrated the truth of what some of our people say, that there is not gold enough to meet the demands of a single day. Bankers are always talking about their reserve. The right way is to wind up the banks and let the general government issue currency, with

a reserve of convertible bonds. It can issue just as many bonds and just as much paper as people want, without being tied up by a niggardly reserve. You talk about limitation: that is the very thing I want to get rid of. If I could put a financial motto on the breast or the back of the American eagle, it should be Greenbacks and Silver.

O. P. E. Your argument, Mr. N. S. B., is hard to answer. It would seem as if you must be right about the creation of deposits, and retail transactions; but what can you do, except to buy more gold? — and that would certainly be expensive.

N. S. B. You and C. B. C. misunderstand me. He has no conception of the forces at work behind money. He talks as if he considered money the living power, and production the dead weight to be moved. He might as well proceed and maintain that the money in Archimedes' pocket could easily have moved the world without fulcrum or lever, and that iron will always turn to bread.

C. B. C. There is more truth in what you say, Mr. N. S. B., than you dream of. See how France has prospered under all her burdens. It is her enormous circulation *per capita*, which has enabled her to grow rich as she has done all the time, while heavily taxed. If this does not prove that money makes prosperity, what can? The more paper money she had, the more she prospered.

N. S. B. It is not the money that controlled the people of France, but they controlled the money. They retired their gold and silver with their paper, and used the latter. It is the quantity of circulation and volume together which determines production and prices, and not volume alone. If the banks were to stop, — if you choose to imagine such a thing, — how could the general government do the business? Producers could not get money of the general government without borrowing it, and they could not get bonds without borrowing them of holders. The government can't go into banking, for banking is a trade risk in which the bank's share is guarantied.

C. B. C. I never thought of that; but still, as long as we

have the case of France before us, Greenbacks and Silver is my motto. We want a larger *per capita* circulation, at all events.

N. S. B. What we want is a duly regulated banking reserve. Gold and silver would have distributed themselves in the tracks of commerce with great regularity, had not "economizing expedients" prevented. We must not think, with the bullionists, of disturbing the actual distribution that has taken place by the use of metal, or notes issued upon a deposit of metal, dollar for dollar; but we need to make the metal we shall have, after a return to convertibility, do us the most good possible as a regulator of what Mr. O. P. E. calls credit, which is not credit, however, but the circulation on credit, through the banks, of money largely in excess of consumers' markets. The use of money, under all circumstances, is a credit, — that is to say, a conventional process. When its circulation is not largely in excess of that of commodities for consumption, it may be called the cash circulation; when it is largely in excess, it may be called, with emphasis, the credit circulation of money. There is harmony of production with the former, as in France; there is discord of production with the latter, as in the United States.

O. P. E. The case of France seems to explode your unit theory, Mr. N. S. B., for why should the money-holders of France have retired their vast total of gold and silver if they had not known it to be a valuable commodity, and therefore safer to keep than the paper? They certainly knew that they were laying by something of intrinsic value, and substituting for it something that had no such value.

N. S. B. Doubtless they thought so, and they did what all people do to a greater or less extent in such cases. The old mercantile theory of intrinsic value will never depart; and it is natural, perhaps, to store gold and silver money under similar conditions, as one would plate not needed for immediate use. The persistence of this idea is one of the elements of stability in the prices of commodities, where gold and silver are used in whole or part, and it has a salu-

tary influence in counteracting the effects of the irregularity in the distribution of the metals, caused by "economizing expedients," which would arise if they were not considered by the holders to be at the same time both money and ordinary commodities. Were they considered as money alone, and not at the same time valuable commodities, they would be more readily parted with; there would be less economy, and therefore less steadiness of prices. The popular idea of steadiness and soundness in metallic money is founded on facts; but to produce the steadiness, all the complex elements conspire, and none of them should be ignored by the man who seeks to establish a science. Absolute truth, however, is one thing; popular fallacies are another. The fallacy in this case, although contrary to absolute fact, is an important element in producing that steadiness which is the most important of all relative facts in the use of money. If the gold and silver money of France were governed by the common law of commodities, that country having ordinarily about twice as much as Great Britain, and more than three times as much as the United States, its value in France ought to be much less than in England or the United States. In point of fact, however, it is worth more in France than the economized metal in Great Britain or the United States. Hence we hear a great deal about exports of gold from the United States, when bank-notes have caused an "inflation." Gold, undoubtedly, has left the United States in large quantities of late years, but some of it has remained; and when bank-notes are convertible, it is only sent abroad to pay actual balances, although by the expansion of circulation caused by loans, its exchangeable value is, together with that of bank-notes, very much reduced, and both are on a mutual par. But bank-notes are units only, and gold, if its exchangeable value thus rises and falls with the paper, can be no more.

O. P. E. I might as well undertake to deny the truth of a mathematical demonstration, if you continue to argue in this style, but there is an instinct which is constantly rising up in me and telling me not to give way. I can't answer

you, but there is something that tells me it is all sophistry, like Bishop Berkeley's discussions upon substance. You say that a material substance — one of the most solid of all substances known — is but an idea, — a mere abstract series of units which, put in the denominator of a ratio, give price; and when made to change place with the units of goods in the numerator, give purchasing power. But here comes Mr. O. S. B., who has had time during our long discussion to go to his bank and spend an hour or more.

C. B. C. And here, too, comes Mr. S. L., who has had time to find out that there is no work for him in this neighborhood.

O. S. B. You are still talking, I notice. I hope you have arrived, during my absence, at something practical. I hate theories. Why can't you writers turn political economy into something that will interest people? I believe it is generally voted a bore, although it involves the consideration of a thing we never tire of pursuing. There must be something in the way you treat it, that makes it so repulsive.

S. L. I hope your time has not been lost, Mr. C. B. C., in arguing the cause of us poor, starving people. I am not a communist, although you could not blame me for turning one, nor am I a vagrant: all I insist upon is the right to honest work, and I ought to have it. We could all have work in one month, if the government would go to printing greenbacks.

C. B. C. My poor, honest fellow, the government that starves its laboring men by short allowances of money, might just as well starve them literally by a short allowance of bread; for how can they get work unless employers can get plenty of money to pay for it, and how are the workmen to pay for their bread unless they can sell their labor for money, which the terrible contraction has made so scarce that the banks will not let it go? I thought Mr. O. P. E. was severe and churlish enough towards American labor, but now comes N. S. B. to refuse it even a crust. He is for tying up the banks by some kind of hocus-pocus arrangement, so that they can't loan more than half or two thirds as

much as they can under O. P. E. and O. S. B.'s theory. There is but one way to do at this rate, and that is to make a united effort and have the Constitution of the United States so amended as to prohibit the issue of notes intended for circulation, either by banks or individuals, confine the issue of paper money to the general government, and at the same time require it to issue just as much as may be needed. Exactly how this is to be done I have not yet decided, but, while we are thinking of a plan, the government and the states together might just as well tax the national banks out of existence, and give us state banks of issue again. I once thought we had gained a great point in getting rid of the notes of state banks, which only circulated about home; but for the sake of having plenty of money, and keeping American labor from being starved out, I say, give us back the old state banks of issue without requiring them to give any security for their issues. As to their reserve, the less of it the better, in order to make money more plenty. Such are my opinions about the necessity of abundance of money, and I shall not flinch from any conclusions they may lead to. I know there can't be any such thing as too much product, and hence there can't be too much labor to make it. O. P. E. agrees with me that there can't be too much labor, but he is not willing to make money abundant: he would starve the laborers, although he says there can't be too many. No man has yet answered my arguments.

O. P. E. I said there could be no overproduction. I did not say there could be no glut, because that happens occasionally. I said further, that excessive issues of paper, whether by banks or governments, bring on eras of speculation which end in panics. Bank credit has no more to do with speculation than mercantile credit, and inflation comes only from too much paper money, although some assert that there never can be too much, if convertible. Gold never causes inflation, because there never can be an excess of it. Gold coin, less alloy, is always worth an equal weight of gold bullion, and it never can be overproduced. No matter what the annual production, it cannot depreciate gold in the

least. I have also just discovered the proper answer to N. S. B.'s theory of a regulated reserve. Where gold is used there is always double barter, as every writer on political economy says. If the double check to overissues, which double barter furnishes, is not sufficient, what further check can be of any use?

N. S. B. Between the two economists, O. P. E. and C. B. C., I am not likely, I think, to fare very well. I once heard a witness, when asked how he stood between the parties to a neighborhood quarrel, reply that he stood nuisance between 'em, and I fear that I am a monetary nuisance between O. P. E. and C. B. C.

O. P. E. By no means. I should be glad to hear you further, and so, no doubt, would C. B. C. and O. S. B., who has not spoken since his return.

O. S. B. and *C. B. C.* By all means; we can't be injured by anything we may hear.

N. S. B. It would be a matter of indifference to me whether you believe gold money to be an ordinary commodity or not, did not a belief that it is such stand, as it surely does, in the way of your learning what is the proper function of gold in banking reserve. I affirm that it is, in point of true science, one of limitation; you affirm that it is a basis, and that bank credit has no direct relation to banking reserve. When you use the term basis, therefore, it is certain that you mean by it something very different from what I mean by limitation. Redemption of money is an exchange of one kind for another. The government which totally or partially demonetizes one metal must redeem it with another, or, possibly, with paper, and to complete the redemption in either case time is required. Strictly speaking, silver used for what is called subsidiary coinage is not monetized; that is to say, is not made money in an international sense, although it is in a limited field money, quite as much as if the coinage were free. It is limited to the same field as paper money, and as money, therefore, may be said to approach nearer in character to paper than gold or silver when freely coined at the barter rates prevailing through the com-

mercial world. A bank of issue is bound to redeem all its liabilities in coin, in order not only to satisfy the mercantile idea or instinct of hoarding; to furnish metallic money or a bill of exchange to go abroad where its own notes cannot be conveniently sent, or if sent would not circulate; to remove even the unreasonable doubts of holders, by giving them coin to pay out at home in place of the notes; but also for a very different and higher purpose. That purpose is the limitation of the circulation as well as volume of paper money by metallic money, coined at the rates of the commercial world, and by the circulation of that metallic money in the tracks of commerce. If you could understand the necessity of such a limitation, in order to secure steadiness of production, and therefore of money circulation and prices, as well while adhering to the old commodity theory, I would not take up a moment's time in trying to show you that it is not true. I would let you enjoy the poetry of barter and double barter, and, if you choose, of bows and arrows. But you cannot clearly comprehend it until you have taken in the conventional and credit character of all money. Adam Smith is the only man who has ever approximated a clear comprehension of it while still adhering, as he certainly did, to the utmost extent, to the idea of commodity and double barter. His great sagacity and clearsightedness enabled him to do this, in spite of the theory. He is an unimpeachable witness to the necessity of a metallic reserve against bank-notes, varying at short averages with the notes in circulation, and therefore limiting their volume by its own. Where the loans of a bank are made to customers whose repayments are upon most occasions equal to that of the advances, he says, the stream continually running into its coffers must be equal to that running out. This means that the outward stream of loans to buyers, in other words, producers, is not in excess of the returning stream of payments by sellers. Production and consumption are balanced, and the balance is proved by the even ratio of reserve to bank debt. In those banks, on the contrary, whose reserve is not only varying but also losing all the time because the outward is in excess of the in-

ward current, they are compelled to obtain their supplies of coin by purchase, and their capital is soon exhausted, unless the loss of reserve resulting from want of balance between the production caused by their loans and the sales of the product to cash buyers teaches them in due time the necessity of contracting their discounts and discriminating between their customers. It was not merely the masterly sagacity of Smith that enabled him to perceive that the test of sound banking lay in the maintenance, on short averages, of an even ratio of reserve to bank debt, as an inscribed polygon of many sides at short intervals touches and almost coincides with the containing circle, but it was also the character of the banking. The banks which did not keep such a reserve as the natural and unavoidable result of the character of their loans, were compelled to retrace their steps or become bankrupt, and the bankruptcy of one or more banks did not involve others: each bank stood or fell by its own acts. Smith was thus enabled to use his natural sagacity and powers of observation to good effect, and, by the aid of his testimony, I am enabled to furnish you a practical proof of my theory. Deposit and discount banks, whether they issue notes or not, stand all together, and not each upon its own strength, because they redeem for each other by deposit, and out of a substantially common fund. Their reserve not only varies, but it varies upon long averages, and therefore during a long period the outgoing current referred to by Smith is progressively and slowly enlarging, while the returning current is all the time diminishing by the same ratio. A banking crisis which is brought about by the paramount crisis between production and consumption, reverses the streams. This crisis is only the bringing about, upon long averages, a rectification which ought to be brought about frequently, and therefore without industrial disturbance, upon short averages. The difficulty is, that this kind of banking has, through the crude explanations which have been given of the nature of deposits and deposit loans and bank credit, so called, as having no connection with the reserve, led to the false opinion that banks loan only what is called credit, and that there is

therefore no necessary connection between loans and reserve, as there was in Smith's time, although there is in reality no difference between the two systems in respect to the necessity of limiting all bank loans by some fixed, invariable law, which will force improvident bankers to become conservative by an invariable test. Smith's lessons have been lost. I recall your attention to them. You, Mr. O. P. E., and other writers, quote Smith as authority frequently in respect to bank-notes, without understanding him. Pardon me for stating thus broadly what truth compels me to say. I incline to think you will not be able to understand his testimony fully, until you make a proper analysis of money, if you can divest yourselves of the old mercantile theory long enough to make a proper analysis, and it is certainly high time of day to do it. You may continue to call money a commodity if you choose, but you must take in fully the idea that it is one of conventional value, introduced in subordination to, and not independently of, man's wants. Paper is just as conventional as metal within its more limited area. But the reason why you have lost all idea of connection between bank loans and reserve, is, that your understanding is beguiled by the terms Commodity, Barter, and Double Barter in the reserve on the one hand, as differing materially from Debt and Credit outside of the reserve on the other; though at considerable distance, as you would have them. Were there no such things as deposits, checks, and clearings, and no form of bank debt, save notes circulating always by the side of metallic money, except when locked up in safes, or deposited in tills or pockets, you would have continually before your eyes the fact mentioned by Smith, that the bank-note all the time takes the place of so much metal, and buys equal values. But the bank-note is but a unit or definite number of units marked upon its face in its character of money, and metal can be no more. Bank-notes can be indefinitely multiplied, however; units of metal unbanked cannot be: the former, therefore, must be limited by the latter, or there will be excess. So long as on the average only four units of the former are paid out, in all

purchases both at wholesale and retail everywhere, to one of the latter, the paper circulation will vary with the metallic.

O. P. E. The notes of the Bank of England represent for the most part gold: the theory was that they would vary as gold varies, and I suppose they do. You are wrong, I think, in bringing Smith forward as an authority. It is true we have always referred to him to prove that there can be no excess of bank-notes. I doubt whether we ever had in mind that there were no deposits in his day in Scotland, or at least none of any importance, but this only shows that we have been mistaken in referring to Smith. Deposits and bank credit have been developed since his time, and they have shown what a vast volume of business can be transacted by mere debt and credit, with only a very limited amount of money; the smaller transactions of commerce alone require a commodity like money. My creed about commerce and money can be said in a few words, as you perceive. The smaller transactions may be called the commodity side; the larger, the credit side of commerce. If we have been quoting Adam Smith all this time to no purpose, so much the worse for him. Living, as I now perceive he did, when only money was used, and before credit had, as it has in our time, almost entirely taken the place of money, his testimony is of little importance. Credit is the life of our time, and it looks sometimes as if it must one day supersede the precious metals altogether. Commodity will then, by almost universal clearing, be cleared from off the face of the commercial world.

S. L. I have been listening carefully. I don't fully comprehend what Mr. O. P. E. has said, but as far as I do, I understand him to mean plenty of money, and that I favor, because it means plenty of work. By credit I take it he means bank credit, and if I can understand it, he means by that plenty of money. I call it money, because I can't understand how we are to be paid in anything but money. If my employer gives me a check I can use it. I have only to call for bank-notes, or coin, if I want it; and if I were rich enough to have a bank account, I know enough to know

that I have money in bank, or, as I have heard it expressed, "at my banker's." I know that means ready cash, although I suppose the learned call it credit. By credit I certainly mean something that is the very opposite of cash, but I suppose it is only a new name they have for money. They may call it what they choose if it keeps me at work.

C. B. C. I have been long silent, hoping to hear words of encouragement, and at last I have them. When N. S. B. opened, I supposed he was on my side, and I was hoping when he talked about double barter and conventional value that he was on the side of American labor and abundance of money; but when he referred to Adam Smith as authority for limiting bank-notes by metallic reserve, I perceived that he was on our side only to betray us. The only hope for banking lies now with O. P. E. Banking is doomed unless the banks can be forced into more liberality. They are unwilling to lend, and have always contracted when they ought to have expanded. They helped Mr. McCulloch to bring on the panic of 1873, which was the result of a terrible contraction of money. But if their course in the future should be to loan freely, and by extending clearing let the reserve take care of itself as O. P. E. proposes, I shall be satisfied to keep them.

O. S. B. I must speak, lest silence imply consent. No extension of clearing will ever make me believe that a good reserve can be dispensed with: there can be no safe banking without it, and that, as a practical man, I well know. At the same time, however, I must say that my reserve can't be kept at an even average for short periods. The movement of crops and the distribution of goods at certain seasons keep every banker's reserve varying all the time. When there is a demand for money, then I must have the privilege of making loans. I am bound to confess, however, as a candid man, that my reserve, in spite of all my efforts, progressively diminishes, although very slowly, up to the time of a banking crisis, and then progressively increases. Under the use of bank credit, so extensively in modern times in place of money, this, I suppose, cannot be avoided. I am surprised

to learn from O. P. E., however, that Adam Smith must be given up as an authority any longer upon bank-note circulation. This, I suppose, must come from the great difference between bank-notes and credit. Gold coin is a commodity which never changes its value. It is one of those things that never can be overproduced, and I believe it will always be the basis of circulation. This will always keep prices steady, because gold will be the ultimate measure of value, as a yard-stick is of cloth. Nor do I believe that banks of issue or of deposit can ever be given up. But, possibly, N. S. B. may have some new ideas upon these subjects. I am more ready to hear him since he has referred so often to Adam Smith. I should be glad to hear wherein banking with credit differs from Smith's banking with notes; how a reserve can be kept as he says; and whether gold is not a perfect standard of value.

N. S. B. I can answer you in a few words. Whether you call gold coin an ordinary commodity, and believe in double barter or not, we have lost a large part of the portion of metal which the needs of commerce would have brought to us, or rather retained for us, out of the produce of our mines. Great Britain is also short in her portion. We have both economized. To abandon bank debt by note would require us to disturb considerably the ratios of metallic distribution. It could, however, be done in the future by adopting a very gradual process. But to abandon bank debt by book would disturb very seriously the ratios of metallic accumulation, and therefore of value; and as long as we have bank debt of any kind, in excess of reserve to pay it with, it must, if we expect to maintain steady prices, be limited, as Adam Smith testifies, by a metallic reserve, varying, not as O. S. B. says, at very long, but at short averages with bank debt; and it is immaterial whether the debt is evidenced by book or by note. The reason why this variation should take place within short and not long periods, is because the reserve, unless banks are forced to buy gold, is made up entirely of the payments or deposits in bank made by sellers in a consumer's market, under deposit and discount

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banking, and under issue banking, of the payments into bank of sellers who are borrowers only, in the absence of depositors. In all kinds of banking the reserve under a sound system is made up of these payments or deposits, or both, and the ratio of reserve to bank-notes is the only possible indicator of excess, while the maintenance, at a proper ratio, of the reserve, is the only possible mode of limiting the use of money through bank debt, as nearly as possible, to the wants of a consumer's market. None but banks can make those loans which the present state of metallic distribution requires, or keep the reserve which is necessary to supply them. It is impossible for the government to do this business; it is absolutely necessary, however, that it should be done, and it cannot possibly be done except by banks of issue or deposit and discount, or both. We can economize metal by slow and gradual changes in the future to such an extent as to get rid of bank-notes, unless covered by a deposit of an equal amount of metal, substantially after the English plan, but we never can give up banking in some form, without producing such a disturbance in the distribution of the metals as to make it out of the question. We must continue to have banks of issue or deposit and discount, or both, as we now have. A sound system of banking is more important to the country at large than the banks, because the interest of the whole country in the subject must be greater than that of only a part. It is, therefore, not wrong ; for that is not the word, — it is stupendous folly to tax the national banks as they are now being taxed, and to talk of going back to the issues of state banks. So much for your question in relation to banks. As to your remark that no overproduction can take away from the exchangeable value of gold, it is on the one hand substantially true, and on the other false. Gold as well as silver have been for ages distributed in the tracks of commerce, but of late not regularly. Were they, as money, ordinary commodities, they would have been distributed regularly up to this day, because there would have been an equal necessity, and therefore an equal demand for them, in proportion to com-

merce. Because in their character of units of valuation, purchase and payment localized in and limited by the containing metal, their place could be, it has been, taken by bank and government paper, more or less in all countries. Such a substitute could never have been made without a reason, and such as I have given is the reason. For the same reason, and for no other, gold and silver in the reserve of a deposit and discount bank can be "economized." If all commodities were needed only to circulate or distribute continually like gold and silver coin, instead of being, by reason of intrinsic utility for that purpose, distributed only to be consumed, their intrinsic qualities would become unimportant: they would require division by some regular rule; by measure or by weight. But for no other purpose would division be required, and upon no other plan could it be made. If the dimensions of the units of some of the commodities were so small that they could be banked, not only could all the exchanges formerly made with the whole be now made with one fifth of their former number, when unbanked, but there would be no assignable limit but a crisis and blocking of the exchanges to the number of exchanges with units of other commodities which could be made with the units now banked, although reduced to one fifth of their former volume. Therefore eighty per cent. of the material could be dispensed with, and twenty per cent. without the use of a single unit of bank credit, which, even to mention, is absurd, could maintain not only harmony in all the exchanges, but its use be carried to such an excess as to create discord, which it would take time to rectify. What all commodities would be used to accomplish in the case supposed, gold and silver, so far as they are used as money, are now employed to accomplish. Hence barter rates of value, between the commodities gold and silver, are regulated inversely by quantities, and not by quantities *plus* qualities. Again, if gold and silver were ordinary commodities, they would not have depreciated regularly in purchasing power since the discovery of America. The general opinion that silver is only a commodity, finds expression in the fears of those who, like

you, imagine an "inflation" as the result of its coinage by the United States in excess of subsidiary wants. This opinion is founded on the fallacy which beguiles you. If gold and silver coin be, when used as money, such a series of units as I have mentioned, then a large annual product of gold continued for years ought not to disturb its present value materially; for even should the increase of the units of the product be in excess of the increase of the units of merchandise and capital to be distributed by it, the proportion or ratio between the whole mass of coin on hand and the new product of metal, would be too small to seriously reduce purchasing power. That is the true reason why gold in France, for instance, maintains its purchasing power without regard to increase or decrease of metallic production. The ratio of increase or decrease is so small, when compared with the whole mass of metal actually coined, that it can make no appreciable change in the purchasing power of the metal when scattered in the tracks of commerce, as in France, and not banked. From this point of view you are right in saying that the exchangeable value of gold is steady, independently of its production; and unless you change your place of observation, you might insist that its value never changes, like a traveler in a railroad carriage which is motionless at a station, who, seeing the carriages of another train moving out slowly in advance of his, thinks his train is the one in motion, until he rectifies the error through the ocular demonstration to the contrary, obtained by looking at the wheels of the train actually moving. After the discovery of America, gold and silver fell rapidly because there were few banks, and the ratio of annual production to mass was large in comparison with the present ratio. Again, during the suspension of payments by the Bank of England, and for the last twelve years in the United States, the premium on gold has been no test of the purchasing power of paper, or of itself. Mr. Tooke wrote his "History of Prices" to show, with other things, that the premium on gold was a test of the true difference between the purchasing power of gold and Bank of Eng-

land notes; his theory being that if gold had fallen in purchasing power, it was from causes independent of the issues of the bank, and that it resulted from deficient harvests, etc. But the fact stands that there was a general rise independently of premium, both in England and the United States; and when the fall came, it was from causes paramount to gold, or anything else but itself, in both countries. It was a crisis in production and the exchanges. But if you will examine, you will find that unconsciously, and indirectly, Mr. Tooke, although undoubtedly a very able and clear-headed man, demonstrated the error of his theory by his own tables of prices. His tables are largely made up of prices at wholesale of imported goods, or perhaps, rather, the actual cost of importing. Of course the importations were reckoned at metallic rates with only premium added, or to be added. This did not show the prices of home productions. Gold was in England, as it was in the United States, therefore, the cheapest relatively of all things, as compared with prices abroad. This made it profitable to send gold, not absolutely required at home, to invest in merchandise abroad. The higher the premium the less, the lower the premium the greater, the inducement to send it from home. Looking at gold from this point of observation, your theory of unvarying exchangeable value is false. Gold cannot measure value like a yard-stick, unless you consider the yard-stick as always varying more or less, — sometimes a little longer, and sometimes a little shorter, than the true length. If you consider it as thus varying, but only slightly and at short intervals, you can form some idea of what I mean by maintaining a reserve which varies as little as possible, and at short intervals, because the sales in consumers' markets are equal to those in producers', with reasonable charges and profits added.

C. B. C. You are right about the premium on gold. The premium was a boon to American labor while it lasted; and if the government had issued sufficient paper, instead of contracting its issues, the premium would have been maintained at high figures, and by keeping out importations would have stimulated American labor.

O. S. B. It would have stimulated it only to destroy, by making repudiation through overissues probable, if not certain. The great mistake of the war was an overissue of currency by the government. I am half converted by the arguments of N. S. B. in respect to bank reserve, although as to the commodity and double-barter and credit theories, I am not. It looks as if the latter must be true, at first sight, as he says, and to me at second sight. I shall take time to think of it. But as to variable reserve, — if the state of the reserve shows, as he says, what consumers, for whom goods are made, are doing with them, and that sound loans maintain a sound reserve, I am not so clear in my opinion about a variable reserve as I was before. It may be, after all, that a bank which, without regard to the clamor and demands of any of its customers, keeps such a reserve, will not only help them by keeping trade steady, but will, in the end, make the most money for its stockholders. I confess, however, that I should not have been half converted in this way, had it not been for what N. S. B. said about the testimony of Adam Smith. Why should a variable reserve be the test of good banking in our time, if a steady reserve was the test in his? Can't we loan more money with the same reserve than they did in his time? If a customer paid his note or bill with bank-notes of a bank in Smith's time, did he not cancel bank debt just as much as one of our customers who does it by check instead of returning notes? Is there any difference except in the form of the debt? And is that anything more than a question of form, as he says? In fact, what do we mean when we talk about setting off debt against credit, or debt against debt, and a banker being a dealer in credits? How can a banker in our time be a dealer in credits, any more than a banker who issued notes from a bank in Smith's time? N. S. B. says that we don't use our credit except to circulate the money of our depositors by virtue of a credit extended to us by them, and that bank loans are supplied by the incoming stream of deposits and payments made by the sellers in consumers' markets, as they were supplied in Smith's time. The only difference, according to him, seems

to be that in Smith's time the stream was supplied by the payments of borrowers, as there were no depositors. But is this not a mere question of form? — for the reserve was supplied out of the same market in both cases. I can't, I confess, answer N. S. B.'s argument, that the reserve, as it is called in our banking, as it was in Smith's time, is the fund out of which all payments are made, — clearings, I suppose, only saving labor, and so disguising the real fact; but I am not yet ready to accept that theory. I am unable to perceive, however, with him, why gold should not be a basis (he calls it limitation) of loans, and therefore of checks and clearings, for all transactions, wholesale as well as retail, as much now as it was with banks of issue only. After all, too, I never pretended to be able to see how bank credit or bank debt was used to buy with, unless in some such way as bank-notes are used. I have frequently asked what bank credit is, but never had an answer. I can't understand what it is, unless it is a debt which a bank owes a depositor, and he transfers to the seller when he buys of him, as he would bank-notes. If the check is not good, it is no more a payment than if made in counterfeit bank-notes; if good, it pays. The check takes the place of bank-notes, then, and is limited by the drawer's credit in bank. The delivery by transfer of this credit, like the delivery of a like sum in bank-notes, is what pays, where no cash is actually delivered out of the reserve; or, on the other hand, the money in the reserve may be said to pass and its delivery saved by clearing, as N. S. B. says. I know that in a very practical and useful book, entitled "Banks of New York and the Panic of 1857," the writer, Mr. J. S. Gibbons, states very plainly that the clearing-house system of settlements requires the banks to keep themselves stronger in reserve than was necessary under the old system, where specie was carted or carried about. He calls it the restriction of loans by the necessity of maintaining a certain average of coin *from resources within the bank*. Now the reserve was sufficient to make all the payments called for by the checks of depositors, in coin or notes, as might be required, and actually made

them, before the clearing house was established. When we carted specie around, in my younger days, from bank to bank, we paid in gold the checks drawn against our reserve in coin. The checks must have been drawn against our reserve, because our reserve made all the payments. Was the coin we then paid out on our checks bank credit, or even bank debt? It is true the coin only passed from one bank to another, but then I had ocular demonstration that it was solid and real, and not phantom coin that paid the checks, for I have often seen it weighed and delivered. Hence it seems to me N. S. B. is right in saying that it is the reserve that makes all the payments, and that the bank books are only the registers of the payments, while the clearings only save the cartage of coin and handling of notes that used to precede the entries on the registers or books, as we call them. For all I can perceive, then, we used to deal in credit, when we paid coin, precisely as we do now. That we deal in credit now, I must insist, for all the books I ever read say so, and therefore I shall, for the present, insist upon it. Some writers call it bank currency, and make it in this way a kind of money. I have seen it stated that Lord Overstone, who, I suppose, may be called one of the founders of the present system of the Bank of England as a bank of issue, maintains the contrary.

N. S. B. You have sustained my theory better than I could in the same number of words, Mr. O. S. B., and you have given, also, a practical demonstration of the correctness of Lord Overstone's opinion. Your facts prove what I have often asserted, that a bank of deposit and discount can no more deal in its own book debt than a house can stand in the air without foundation. If there were no deposits there could be no such thing as a bank of deposit and discount: a deposit is the first condition of its existence. If it be true, as your writers assert, that there is no connection between the reserve and bank debt or credit, there can be none between the reserve and loans; but all deposits came originally from the money in circulation: they still come from that source because all bank debt over and above reserve demon-

strates products unsold, and the labor to produce these cost for the most part bank-notes or coin.

O. S. B. Suppose a bank were started for the purpose of dealing in credits altogether, either with or without any reserve, but with the obligation to pay all its debts in coin: would not this bank deal in credit altogether, as we insist banks now do?

N. S. B. It would deal extensively in debt, and not much in credit.

O. S. B. Why do you make such an absurd reply?

N. S. B. Because an abstruse question requires an abstruse answer, as one of the Gymnosophists taken captive by Alexander the Great, rejoined, when asked why he had replied to the question, Which is the longest, the day or the night, by saying, The day, by one day. To ask me whether, in the case you suppose, bank credit would circulate, is to ask, what *seems to me* not merely an abstruse, but an absurd question. Credit implies a sale of something on time, the seller waiting until that time has expired for payment. You are misled by the word credit. You might with as much real though not conventional propriety, ask whether faith, hope, charity and time circulate. In the case you suppose, what the bank would lend — admitting for one moment the practicability of such banking — would be units of debt, evidenced by entry, or inscription, if you please. The borrower and depositor would need an authenticated pass-book and checks. But this bank would not deal in credit. It would deal in unit dollars of its own debt issued, of its own and other bank debt deposited, and coin. As a bank of deposit, it would deal only in bank debt and coin *deposited*, and not in its own debt independent of deposits: in short, it would deal only in deposits. If Lord Overstone meant this, by denying that deposits, independently of the reserve, are currency, he was right.

O. S. B. But the reserve is only a small part of deposits: the credit entries over and above reserve standing to the credit of the account of depositors, are inseparable from the reserve, and count as a substitute for money: otherwise, with

a reserve of only ten per cent. a depositor who supposes he has one thousand dollars in bank to his credit has only one hundred. Of what use is this reserve, except to supply retail trade?

N. S. B. If you fully understand the reply I shall make, you will in time give up the absurd theory of a circulation of credit, or a setting off of debt and credit. The founders of the present system of note issues of the Bank of England supposed the notes would vary as gold, if used in their stead, because the volume of each would be nearly the same. Unquestionably they were literally correct: it is simply a matter of convenience. But probably this is not exactly all that they supposed or took it for granted would result. They thought that these notes would vary in England with banks, as gold varies in France without banks. This was a mistake, which arose from regarding gold as a commodity, like copper or wheat. The mercantile theory of intrinsic value in gold or silver is well enough, and in fact very desirable, in its place. The sagacity of Smith and the kind of banking in his day, enabled him to perceive, in spite of the theory, the necessity of a reserve varying in volume within short periods, although he looked only at the money side of the exchanges. At the present stage of development of production on the side of skilled labor, and on credit through the aid of bank loans, it is high time to find out what money really is; whether it is limited by one commodity like gold *out of bank*, or only *by all commodities produced*. Because money — the mercantile theory which is good in its place, to the contrary notwithstanding — is conventional, the true question under any monetary system is, not merely how much money there is *per capita*, to each ten millions of capital, or million of product, but what is the total of exchanges of all kinds it causes to take place? Being conventional and auxiliary, the forces which move it are production and commerce. In these lies at this time the real disease: a commercial and banking panic, if it occurs, is not the disease, but one of the symptoms. It is the reserve that makes all payments: if gold or notes are, in consequence of a loan,

withdrawn from it to pay for labor, and the laborers pay out nine tenths of the money within a week, to supply themselves and families, in consequence of which it is within that period redeposited in the same bank which made the loan, it is credit that pays for the labor and makes the purchases of goods at retail, if it be true that credit pays for the same goods, when bought at wholesale. But it is not true that credit pays in either case. If A. has a deposit in an English bank of one thousand pounds, and makes as many purchases by the use of his deposit as if he had it in his safe in sovereigns, the effect upon the variation, even of gold, is the same as if he had the sovereigns instead of the deposit. The total of his deposit is the total, subject to one qualification, that he would have in cash were there no deposits. The qualification is, the addition to the total of deposits over and above what they would have been, had the banks been deposit banks only, without the power of discounting. The difference, whatever it may be, arises from the expansion of circulation through loans, which increase the volume of deposits in excess of the contraction of circulation by payments of loans, which decrease the volume. The actual verities of the case, the results, are precisely the same as in Smith's time, and the same as they would be in France, if banks were established and the coin now lying in "hoard," economized, say to the amount of seventy-five per cent., so far as deposited in banks. There would be no payments made in credit in that case, any more than now, under our banking, but a large volume of circulation of money on credit would appear registered on bank books, giving rise to production on credit, and if the loans were not limited at some definite point, production on credit would proceed to such an extent, if the conservative instinct of the people did not prevent, as to add largely to the international embarrassments caused by the extension of the credit system of circulation, aided by the improvements in machinery and the other accessories of productive power. It is not the continually increasing economy of hand labor which causes a want of harmony in production: this is a potent auxiliary, but not the paramount

cause, for that cause is the fact that so much labor can be fed and supported in producing results that will not find a consumer or cash buyer before a crisis comes which arrests the production. The crisis is too long delayed: it does not come quick enough: if it came quicker, it would be lighter. It is the expansion of circulation which raises prices and maintains this speculative production, under the guise of rising prices, being international as well as national in its cause, and in its effects. There is no word in the English language to express the results as a whole, nor is there one to express the remedy or the paramount counteracting cause. All the terms at hand are Production, Consumption, Inflation, Expansion and Contraction, Panic, Crisis, Plenty and Scarcity of Money. We are destroying in the United States as well as consuming, vast quantities of valuable timber, and erecting short-lived buildings and improvements. This is not called speculation, nor is it really such. There is a want of harmony in our production: the improvements in cities are in advance of solid improvements in the country; the native population is abandoning a portion of the country where it has lived in times past, and departing, not only to other states and territories, but removing to towns and cities. The paramount cause, and the only one which can be immediately controlled, is precisely the one which the sagacity of Adam Smith enabled him to point out as a matter of fact, — the excessive expansion of circulation of money, without which so much labor could not be supported, while bringing about the resulting want of harmony in production. This cause is intensified by the improvements referred to. What I aim to do, is, to show that a metallic circulation like that of France is the safest, the surest, and steadiest of all circulation, and that we need a metallic limitation to bank loans, maintaining itself at average within short periods, a result very difficult, if not impossible of attainment under our system of banking; and attainable, if at all, under national and not state control.

O. S. B. I shall need time for reflection before answering you, but for the present I cannot give up the credit theory.

I perceive, however, I think, the ground of your argument. It is, that although the mercantile theory of intrinsic value in gold and silver coin has a conservative and steadying effect in maintaining its exchangeable value as money, where it circulates freely outside of banks in exchange for commodities, and may therefore be considered as true, so far as people act upon it, yet, when it is banked in a reserve by sellers, who have just received it out of reserve from buyers, its conventional unit value, which it possesses in common with all money, and which in reality alone makes it money, enables banks to lend and borrowers to use it to pay labor faster than labor's results on one side of the productive field can be exchanged for labor's results on the other side. Therefore, the only way to force the exchanges of labor and of merchandise to perfect themselves within short periods is to make metallic banking reserve vary within the same periods, and thus prevent the expansion of its circulation through loans from proceeding so far as to produce a banking and commercial crisis before it is arrested by a contraction of circulation through payment of loans. You hold that in this way only can an approximation to the steadiness of the metallic circulation of France be obtained. You say that the money which really makes the payments, whether there are clearings are not, is in the reserve, while each depositor makes the same purchases in number and value he would do if his deposit were all in gold, or all in bank-notes, — the difference between the reserve and the total of deposits being money economized. This follows, you say, from the conventional character of all money, which, notwithstanding the mercantile theory, is, judged by its effects, only a process for the distribution by exchange of the fruits of labor.

N. S. B. You have spoken for me better than I could have done for myself. It is immaterial, after what you have said, what you suppose yourself to think about double barter, commodity and credit. Your very statement is sufficient, without argument.

O. P. E. It seems to me that O. S. B. is like a general

who has signed articles of capitulation, and still insists that he has not been beaten. I shall not capitulate for the present. When clearing is all the time gaining more ground, and the use of gold is getting out of fashion more and more, it is folly to talk about increasing reserves. As small checks come more and more into use, we can liberate more and more gold and save expense.

S. L. I have seen small checks tried to pay wages, but they were not liked, because the men said they were only a source of vexation and annoyance, and the banks disliked them. The employers all had to fall back upon bank-notes and change: they said the banks told them they might as well be all day paying out currency as to force the banks to do it, to say nothing of the trouble of identification.

C. B. C. S. L. is right, no doubt. The men like to see their money as quickly as possible. O. P. E. begins to talk sensibly again. He said he was in favor of a good reserve, but he wants to extend clearings, and I suppose that means to give more bank-notes, because he says he wants to sell off the gold as fast as he clears. I think he has now become my ally, and I invite him to help me get rid of the banks, and start my scheme with the convertible-bond attachment, which will be a perfect regulation of itself. His scheme of extending credit and clearing, and economizing gold, when there is not gold enough now to do any good, will not work, unless he adopts my regulator and gives up his gold. Am I not right, Mr. O. S. B.?

O. S. B. I think you have the best of the argument, but there is a practical difficulty in the way. You have fairly lost France, according to N. S. B.'s demonstration, for her financial stability has been shown by him to result from the impossibility of loaning to excess. Excess is the very thing you are asking for, because you cannot avoid it through the regulating influence of the convertible-bond attachment, even if you could borrow. This regulator is as useless as the safety-valve of an engine that has no furnace or boiler; for as the government will not bank, where will you borrow your new issues of notes; and if you do not borrow of gov-

ernment, how are they to be issued at all? On the other hand, if O. P. E. can prevail upon the banks to extend the credit system too far, and clear for everything, he will lose even the regulating attachment of a fluctuating reserve. As a practical man, I think it is high time to inquire where we stand.

N. S. B. Let us adjourn this debate, and meet again Monday, a week hence, at two o'clock, p. m. S. L. will obtain work by that time, in this vicinity, in all probability; and if he cannot, O. S. B. must make him a small loan to supply his necessities. C. B. C., meantime, will be thinking how he can make his convertible-bond attachment work, without working the machine itself, and O. P. E. how he can clear without gold. When every one had more to do than he could attend to, we never should have thought of making a serious matter of a meeting which occurred so accidentally as this, but we have more time now: these are matters of engrossing interest: we represent all parties but the bullionists, and there are so few of them they need no representative.

MONDAY, 2 P. M. DIALOGISTS MEET: DIALOGUE CONTINUED.

O. P. E. Well met, gentlemen! we are prepared, I trust, to finish the debate now. I can say all I have to say in a few words.

S. L. I am still in the neighborhood without work, although I have the promise of it next week, and meantime O. S. B. has kindly acted upon N. S. B.'s suggestion: otherwise I can't say what would have happened to me. It is hard to want honest work, and not be able to get it.

C. B. C. That is true, under all circumstances; but when finance ministers are in league with banks to contract the currency, and starve honest men who are clamoring for work in the old forges and shops they have been forced to abandon, it is not only a pity, but it is a crime. I think I have studied out a plan to make the convertible bond attachment

work not only itself, but the machine, as O. S. B. called it. Every capitalist engaged in manufacturing ought to have the right to give his property as security to the general government for notes. This will set the machine in motion in spite of O. S. B.'s raillery, and regulate the movement in company with the convertible bonds. This starts, and at the same time regulates, the machine, and afterwards the bonds will do the rest. So far from being beaten by France, we shall move in advance; for while we get rid of banks, we turn the government into something as good as, and in fact better, than a bank. I think my scheme is better than O. P. E.'s clearing arrangement; for if we are to lose all our hold upon gold, as unquestionably we must, and O. P. E. himself virtually admits, while at the same time denying it, we need to have a firm basis for our credit, which will then represent the whole capital of the United States, while O. P. E.'s credit represents nothing but the beggarly capital of banks which are failing all the time. I hope you are all ready to give up your unfounded fancies, and listen to reason.

S. L. I am rewarded now for waiting to attend at this meeting. I cannot express my gratitude for the noble plan of C. B. C. I thought he seemed to be at a loss last week, but he was only waiting to gather strength and annihilate his opponents.

O. P. E. I do not believe C. B. C.'s attachment will work at all. It is the same old plan tried by John Law and others, to coin everything into money: it will not work, and would starve more laborers than it could feed.

O. S. B. That, I believe, is true: there is, after all, but one kind of currency that is really safe and steady; and that is gold, and paper duly regulated by gold. Cities have been growing rapidly, and the excess of population in them has been supplied not only by immigration from foreign countries, but from the surrounding country. Again, hand work of all kinds is continually more and more economized, and some people are in favor of abolishing the patent laws, or very materially curtailing the rights of inventors. They say

hand labor has been economized too much, and it is time to stop. I do not believe this, because it looks like admitting civilization to be a failure after it has asserted its mastery over the forces of nature, beyond a certain point. Still, when thinking men entertain such opinions, it is certain evidence that there is some very serious trouble in the social system. Commercial and banking crises seem to be getting more and more severe, and it seems to me that an heroic remedy of some kind is needed.

O. P. E. You are a good way beyond a glut, Mr. O. S. B., now; and if you keep on, you will not only give up double barter and credit, but the impossibility of overproduction; and to give up these is to give up all our old political economy, which, dry as it is, has nevertheless nourished us from our youth up.

O. S. B. Truth is what I am trying to pursue, Mr. O. P. E., wherever it may lead me. I am willing to give up all old opinions, if necessary. I stick to credit yet, however, and have not entirely given up the others. I am in a state of doubt. I invited, upon my own responsibility, C. W. M. to attend to-day, but he could not come. He is an old manufacturer, who has been engaged for years in manufacturing, and he says that it is like going up for a time and then coming down for a time, and that all manufacturers would make more money if they could keep their production steadier. He thinks they would produce nearly as much in the long run: at all events, he is sure, he says, of one thing, — that they would make more money by not crowding the market, and keeping always about the same number of hands. I asked him whether he could not stop for a time and regulate his own production to suit himself; but he said this was impossible, for he must be in market with his goods, prepared to sell when all were ready to buy, and when the market was rising, and then have his fall with the rest. If he stopped at all, unless all the rest would stop, he might, he said, as well stop altogether. For the rest, he must rely upon his own experience and judgment in styles and qualities, and sometimes he would hit the market ex-

actly, and after making enough to balance a good deal of loss, make a profit besides. He succeeded in starting a train of thought in my mind about markets, considered internationally as well as nationally. I also invited an acquaintance, — D. G. M., — who is an old and successful dry-goods merchant, but he is engaged to-day, attending an auction sale of dry goods. He says there is risk enough in other branches of trade as well as dry goods; that success depends upon activity combined with sagacity, very much as with manufacturers. A dealer ought to know all the time about what the market needs, and have some power of finding out what it will be likely to want. He ought also to have judgment sufficient not to run all his capital into margins, by having too large an amount of goods on hand, and too much outstanding in debts due for goods sold; and that, as a banker, I and others were blamable for allowing such large lines of accommodation to customers, and so out of proportion to their capital. But the grand secret of all he said was, to buy at the lowest figures possible. Merchants, he said, were loaded down and overstocked by buying too heavily on a rising market, and taking the load from the shoulders of manufacturers, and thus inducing them to go on and glut the whole market. He asked me if I had never noticed that there was everywhere in all countries a grand rise going on for some years, and then a grand fall; and that the policy of a merchant was to keep himself from being overstocked as the goods were going up, and to have his capital well in hand to buy after they had come down. This, he said, was, as nearly as he could tell it, the grand secret of success. I told him I knew there was a general depression throughout Europe, but I never supposed there was any general cause at work. I supposed there was an accidental coincidence of local causes. He said there was a general cause, and I was surprised at the intelligence and great clearness with which he explained it. He says a great rise must necessarily, in the very nature of things, be attended with a great fall; that if people work too much to-day at anything, they must work less at it to-morrow, in

order to have the necessary average. I asked him how it was possible for the same cause to be in operation everywhere? how he could show producers who were sellers everywhere, unless he could find as many producers everywhere that were buyers, at the same time? He said that wherever there were buyers and sellers, he supposed there must be money, for he could find no other use for money. I asked him where all the money could be found to make so much buying and selling, when prices were going up. He replied that this was an affair I ought to understand better than himself, for I was a banker, but he acted upon the idea he had just before referred to, — that money was intended for use, and the more buying and selling, so much the more was money used to buy; and the less buying and selling, so much the less was money used; and where there was anything to sell that anybody wanted to buy, there was always money enough. He said if money was intrinsically valuable for any other purpose but to use, he had never found it out. People, he said, had been trying for ages to find out some other purpose, but they had never found it yet, any more than they had perpetual motion. He is a man of vigorous common sense, though without much of what is called education.

O. P. E. What did he say about the general expansion which took place in credits throughout the commercial world a few years since, attended by great speculation, followed by the terrible collapse of both, under which all nations, especially the United States, are now suffering?

O. S. B. He did not talk about either. As I have already stated, he said money was intended for use, and the more buying and selling there is, so much more use is there for money. He spoke as if he thought everybody ought to take this for granted. His remarks set me thinking, and I at once thought about barter and double barter, of which N. S. B. spoke the other day. He said, as you may recollect, that when we send merchandise abroad, — for instance, a cargo of wheat, — and draw a bill of exchange against it upon the consignee, and sell the bill in the market to a mer-

chant who buys English dry goods, it is an entire mistake to suppose that the wheat is bartered for the dry goods, as writers say, even if the bill is exchanged directly for the goods. You doubtless remember that he declared this to be one of the fallacies resulting from an ignorance — or, to speak with more respect, and perhaps more correctly, the non-perception — of the conventional character of all money, illustrated with such vigorous common sense by my old friend the dry goods merchant. He said that the bill of exchange is substantially a time check, because the bill must be discounted sooner or later by a bank; and it is therefore not money, nor credit, but an instrument, long time in use, authorizing the person to whom either money or goods had been sent, to pay the drawee or holder with money actually in hand or to come in hand by sale of the goods; that the bills now drawn against merchandise were discounted by banks who paid out of their reserve as they pay on all loans; and that if it was impossible to dispel the illusion that this was a case of credit and barter at one and the same or at different times, monetary science might as well be abandoned altogether.

O. P. E. You have not yet given us in full D. G. M.'s explanation of the manner in which a general expansion of credit and speculation could occur throughout Europe and the United States at one and the same time, followed by a general collapse of both, as it has been of late.

O. S. B. I was about to say that we had that day a meeting of bank directors: after the business of the meeting was finished, D. G. M. remained, and we naturally fell into conversation, and had proceeded as far as I have related, when an old acquaintance of mine, who is interested in several furnaces, looked in. I invited him to be seated; he had come to town to enter into a contract to furnish the iron for a long railroad bridge. Speaking of hard times and the existing depression, as D. G. M. and I had been doing, the iron contractor had a good opportunity to tell us how low iron of all grades had fallen in price, and he thought the low prices would stimulate consumption. He disliked to hear the word

overproduction, even lisped, but he stated some curious facts about iron. He said when the American furnaces were running full blast, the English were doing the same, and now, when they were running short in time, hands, and metal, the English were doing likewise. If the American and English producers could contrive to manage production in such a way that when one set would be running full blast, the other would be sure to run short, instead of both running full at the same time and short at the same time, inasmuch as there must, on the average, be as much short as full running, it would equalize the production and steady the industry, to the great benefit and comfort of all the employed, as well as all the producers. He said, a few years since, it took all the English and American furnaces to supply the demand, but now the American could much more than supply it. The English, he said, had many countries for customers, while the producers of the United States had hitherto, for the most part, only their own. He said the English had supplied enormous quantities of iron rails to different countries of the world, but the demand had arisen almost everywhere and then fallen off everywhere at the same time, while production had risen and fallen in like manner.

S. L. It seems to me as if the producers might carry out some such plan as the iron contractor mentioned, but that would not help us much, because it would only keep us at work half the time.

O. S. B. You are mistaken. It would equalize the production, not perfectly, it is true, but imperfectly, nevertheless. It might be necessary to discharge some hands in the United States, because it would be necessary to reduce the product when the American turn to reduce had come round, but it would help to diminish the range of variation in demand and supply, by limiting production artificially. Of course, however, it was all a matter of fancy. He did not esteem it practicable; he only expressed a wish that it were so.

C. B. C. I have heard a great deal without saying, hitherto, one word in reply. If such an arrangement were

made, the British would be sure to make the most out of it. Don't yield your rights, Mr. S. L.! With a *per capita* currency like that of France, in the United States, the British would be driven out entirely. We can have it with silver and greenbacks. I am ready to enter into a contract to get rid of all the gold, if I can have plenty of greenbacks and silver. O. P. E. would be my ally in all parts of the field, did he not hate silver as much as I do gold. His credit and clearing away of gold make him naturally an ally, but he says that is in the future. He does not expect to get rid of gold so as to make it a matter of curiosity for numismatists, and occasionally to be laid by in cotton wool or a stocking, only as fast as he clears. Why can't he be consistent and clear it away at once, and give us the *per capita* we demand, with silver?

O. P. E. You are getting away from me again, Mr. C. B. C. I want to hear more about the general expansion and contraction of credit and speculation, throughout the commercial world, referred to by O. S. B.'s friends.

O. S. B. The iron contractor seemed to agree with D. G. M. in opinion about the general expansion of prices and of production. Neither of them even named credit or speculation, because each spoke of the kind of production he knew most about. Of course it would have been absurd for either to have charged the other with abusing his credit or with speculating: the terms would have been out of place and without meaning, except so far as it may be speculation to produce too much at a time; but this is not the ordinary meaning of the word. D. G. M. said that as Great Britain manufactured for the world, there must be a general expansion of demand, preceding the expansion of supply; that she did not intentionally manufacture for nothing, and so far as she did not get ready pay in raw material and the absolute necessaries of life, she must lend, and take some form of debt to show for it. In that case the countries borrowing would use their own absolute necessaries and raw material together with English cloth, hardware, colonial produce, etc., to turn out to their own laborors who were, in addition

to other work, laying down English rails on new railroads. He said that to bring all this to pass, the laborers must be paid in money, and paper money and banks were increasing everywhere except in France, and that the English expansion of production was sustained by a general bank expansion at home as well as abroad. This, he said, was certainly true as between England and the United States, and more or less true as between England and other countries besides the United States. The English expansion, in both of its aspects, was as injurious to the United States as their own. The true practical view of the matter, in his opinion, was, that the facilities for borrowing money, improvements in machinery, and the other accessories of manufacturing power, as well as in agricultural tools, the extension of railroads, beneficent as were the latter in some of their effects, increasing all together and at equal pace, had rendered it necessary to inquire, not so much whether production should be lessened on the whole, as whether there could not be some plan devised to limit and control it, so as to prevent the enormous losses arising from overworking and then being forced to stop, — in short, to bring up the average within short rather than long periods.

N. S. B. This is a sound, practical view of the present condition at which production and commerce, considered internationally as well as nationally, have arrived. The opening of what is called the Renaissance Period in Europe, and the discovery of America, followed by an enormous increase of metallic production, advanced prices regularly without allowing them to fall back. It has been said by some writers that such has always been the result of an increased metallic production. This was the case, undoubtedly, after the discovery of America. It was not a real advance in wealth merely in consequence of increased metallic production going to the mints, but the increasing quantities going into arts and manufactures, and the stimulus to production and commerce, from constantly rising prices. But a rise of this kind, if possible, could not be beneficial if extended indefinitely. It is, at this time, however, impossible,

because the conditions which made the rise not only possible but unavoidable at the period named, have so changed, as to prevent any further rise, and not only so, but they have changed so much, as to make a gradual fall probable. This can't be understood by the commercial world in a day: time is required, but knowledge will come at last, if we succeed in making political economists understand the true theory of money, so as to teach it to the next generation.

O. S. B. You refer, I suppose, to changes in commerce and metallic production.

N. S. B. I mean that if the ratio of annual metallic production to total mass previously produced, and still existing, is one per cent., the ratio of annual increase in commerce to commerce previously existing is greater. This is one of the reasons for making silver, as well as gold, money everywhere; but there need be no hurry about it: the scientific and commercial world have plenty of time before them to learn the difference between what is called double barter and bartering gold and silver for copper and iron, — in short, the conventional character of money, which exists for, because it is the invention of mankind, by a natural instinct, if you please. The present condition of the production and commerce of the United States and England, as well as other parts of the world, however, has no relation to the product of either gold or silver. It arises from the causes you have named, in great measure. It is not credit and speculation, as O. P. E. supposes. These are merely the most convenient terms which offer, to cover up the ignorance which an adherence to old abstract theories makes unavoidable. The grand business of the world is commerce, and the industry which supplies it, and the terms Credit and Speculation ought to be understood in a sense entirely different from that in which O. P. E. uses them, to be applicable. We must understand credit to mean spending money, for the most part lent, or brought to the spending hand indirectly, through money borrowed by way of profits and dividends, to pay for labor, whose product cannot find a cash buyer and therefore blocks the exchanges, while speculation means the estimated,

or perhaps not duly estimated chances of such a buyer within a reasonable period. I think, therefore, a chapter in political economy should be introduced, entitled, —

OF PRODUCTION AND CONSUMPTION UPON CREDIT BALANCED BY PRODUCTION AND CASH SALES IN THE FUTURE, CONSIDERED NATIONALLY AND INTERNATIONALLY.

O. P. E. Of what benefit to political economy can such new-fangled terms be, to say nothing of a serious attempt to discuss them? Is not political economy to-day as perfect a science as the wit of man can make it? Must he not have omnipotent power to create new causes which shall show us new phenomena, before he can have a new science, which even to mention is impious? It is absurd to talk of markets: there is always a market somewhere; our merchants are too lazy and indifferent to find them. All we need is a little more enterprise, a little more instead of less credit, and by more clearing, an economy of that costly metallic product, gold.

S. L. That sounds right to me, although I do not quite understand it all, and I cannot form even a conception of production and consumption on credit. Before O. P. E. began, I was about to ask how it was possible to produce anything upon credit. If there is such a thing as producing upon credit, there must be such a thing as working upon credit, and I can't conceive what that is, unless it means working for nothing, and agreeing to pay for the privilege some time after, which is the most absurd thing I ever heard of. If I earn my wages, and my employer pays me cash, — and cash I must have, in order to buy what I want, — how in the name of common sense can I be said to be working on credit?

C. B. C. Well said, Mr. S. L. I have written a great deal about the French *per capita*, greenbacks, convertible bonds, and silver, but I do not believe I ever uttered as much common sense as you have in those few words. You have furnished me with an unanswerable argument, and I shall fight

for the cause with more zeal hereafter. If you get the cash, what care you, and what difference can it make to you where it comes from? O. P. E. seems to be getting more reasonable, too, because he is getting more and more against gold, and we have no dispute to settle about overproduction, as we both believe there can be none.

N. S. B. It seems to be understood that we are to talk freely, and use plain terms: there was a tacit understanding between us to that effect, and it seems that we have all availed ourselves of it. Our meeting was accidental, and I am very glad it occurred. But before we go any further, I have a request to make. An acquaintance of mine, with whom I have had many conversations, and from whom I have learned what you call the new ideas and new-fangled terms, is writing a book which he calls "The Political Economy of Great Britain, the United States, and France, in the Use of Money: a New Science of Production and Exchange." I advised him to put it all in the form of dialogue, but his reply was that the subject was so dry and uninteresting, that if an American book of the kind were composed in that form, and people were thus lured to buy and read it, they would be disappointed before reading it half through, and would conclude that they had been inveigled into reading something which is disagreeable in itself, and no dialogue can make interesting. Upon the principle of fair play, therefore, he concluded to adopt a plain didactic style. With your consent, however, I shall report to him all we have said, in the form of a dialogue, and let him make it a part of his book.

O. S. B. I have no objection, certainly. I agree with you substantially, and therefore with him, I suppose. I think our ideas are in many respects new, and I must confess that I have obtained mine from you, Mr. N. S. B., to a considerable extent, and so, I suppose, indirectly from him. This is emphatically a proper time for all such works. If any man thinks he has anything new to say upon these subjects, by all means let him say it, for the minds of thinking men are turned in that direction in all commercial countries, be-

cause we witness everywhere the same phenomena: it is only a question of more or less. Right reason, therefore, would seem to say at the very threshold of inquiry, that there must be some general cause in operation to produce such general results.

C. B. C. I have no objection, but of course you will not mention names. You have bantered me, Mr. N. S. B., in this debate, and sometimes you have been rather severe. You must mollify your words a little, when you commit them to paper. You know my candor and good faith in all I have said.

N. S. B. I shall set down nothing in malice certainly, and I shall neither satirize nor lampoon. Your opinions, Mr. C. B. C., have been and still are, more or less modified, entertained by many. They have a perfect right to those opinions, although they seem absurd to me. If I have said anything too severe, I shall write it down with good humor, which sweetens all controversies.

S. L. I have no objection even to the use of my name, but as the rest are not reported, of course mine will not be.

O. P. E. Of course I can have no objection, if names are not given, and my opinions are reported correctly. On the whole, however, that can make but little difference, for my opinions will be found in nearly all the books. I do not believe that labor is a measure of value: I believe there can be no overproduction, and all we need is markets: I believe excessive use of private and mercantile credit and not of money, together with speculation, to be the cause of the present troubles. Of bank credit and of convertible bank-notes, I do not think there is much danger, without speculation. Therefore, I repeat, economize gold and extend clearings.

C. B. C. What are the opinions of the writer you refer to, Mr. N. S. B., and especially what does he think about money?

N. S. B. To coin a word, I think his views might be called composite. He examines all the different theories: begins with development, goes back by analysis, demon-

strates inductively by phenomena, and fortifies his opinion by results. While, therefore, he respects all theories as containing more or less truth, if examined at the proper angle of observation, his leading and central idea of money is determined by its use and the results it accomplishes.

O. P. E. What is that central idea?

N. S. B. I have stated it repeatedly. Judged by results, money is a conventional process, and its value lies in what it buys and the work it accomplishes.

O. P. E. He would take away not only all the fact, but even the little poetry there is about money. Would he deprive the world of glittering hoards, shining treasure, and golden hopes?

N. S. B. The world can never be deprived of the ideas which beget that poetry, and it will therefore remain, but the highest poetry is that of absolute truth. The mercantile theory of money he regards as equally desirable and indestructible in its place.

O. P. E. When and where is it in place, and when and where out of place?

N. S. B. He says the time when it is in place is when holders at large have money, and the place itself is their own reserve, whether that be a pocket, a safe, or a stocking. The time when it is out of place is when the money is in banking reserve. He says that the true cause of the steadiness of metallic money lies in the fact that the ability to exchange and consume actually vary very slowly upon the average, and hence the increase of commerce is gradual, and that at the present time the changes of gold coin as a conventional commodity compared with its existing mass, are, for all practical purposes, equally slow, and hence, aside from banking reserve, it may be said that gold does not vary. Nothing can exceed it, and, in fact, nothing can equal it in steadiness. But useful and true as is this fact in its place, it ceases to be true in banking reserve, because the absolute truth of the conventional character of all money causes it to cease there.

Banks are strengthened quite as much by reducing their debt as by adding to their reserve, because it has the same

effect upon the ratio of total reserve to total debt: in other words, it limits the circulation of money, or rather contracts it precisely to the same extent. This is strongly put by Mr. Bonamy Price in his "Principles of Currency."

Bank-notes would answer in reserve quite as well as gold if they could limit circulation with as much certainty. The metal is necessary, because the object to be gained is to limit circulation after all bank loans have proceeded to a certain point, as circulation is limited under a purely metallic currency. It always would be if the ratio were within short averages definite, and not indefinite. What writers have to learn and impress upon the next generation of bankers, and if they can learn it soon enough, on this, is, as he says, the great fact of the conventional character of all money; and then they will perceive that the next thing to be learned is the circulation or use of money in paying for labor as well as commodities, as distinguished from the volume, and that the true object of a reserve is to limit the use of money in buying labor as nearly as possible by the sale of labor's products in market. He says all money is the same in substance because the same in results, and that the time will soon come when bankers will learn that what they actually use is money and not credit, barter, or double barter. To reduce bank debt anywhere is to strengthen reserve everywhere, because it shows an equal amount of labor's products exchanged for consumption. This is his central idea of money.

C. B. C. Does he deny that the United States have the right to issue greenbacks?

N. S. B. He admits what he calls the deplorable necessity of issuing government paper money sometimes, to take the place of hoarded treasure, but that the volume ought to be carefully limited, and the whole immediately retired as soon as possible. He says the United States issued by far too much, and ought to have retired it all by 1870.

C. B. C. So much the worse for him and his theories. That is all I want to know.

O. P. E. He surely cannot think of making an attack upon bank credit and clearing, well established as these

are. It would be like Don Quixote charging upon the windmill, not, however, that I would compare bank credit to a windmill, by any means. He never can succeed in making me believe that bank credit can be dispensed with, and that the extension of clearings will not make gold, except to a very slight extent, useless. We have not yet reached the limit of economy in gold.

N. S. B. I have thought that C. B. C. and O. P. E. were like two mathematical lines which continually approach without meeting; but I believe now there is a fair prospect of their meeting at no distant period. After the greenback party had nominated their candidate for president, some of their speakers very adroitly brought in O. P. E. and his friends as authority to sustain their assertions about gold. If gold is shortly, by universal clearing, to be relegated to barbarous countries like France, why not clear it away at once and resort to government currency with the convertible-bond attachment? C. B. C. and his friends would, perhaps, by the use of what they call the *argumentum ad hominem* have made a very strong point against O. P. E., if they had been a little more practical. They ignored the banks, because they did not know that it is impossible to use a paper currency with any kind of success without banks; there must be some contrivance for contraction as well as expansion; the convertible bond attachment is insufficient of itself. They ought to have stuck to the banks.

O. S. B. Well said, Mr. N. S. B.! This remarkable fact was brought to the attention of conservative thinkers and bankers during the canvass. It was said that writers of O. P. E.'s school had declared that when an efflux of gold occurred in England, and the bank had brought about an influx, by raising the rate of interest, merchants supposed that the bank would procure in the gold the means of discounting again, and money would be plenty; but it was all a mercantile delusion, because the gold sovereigns which came back were never paid out, and were not needed for any purpose. The bank, therefore, had the same power of discounting without the additional gold as with it. O. P. E.'s friends, as well as

himself, were also referred to as authority, to support the very proposition he has been maintaining, about the extension of clearings and liberating gold in proportion. You may therefore well say that O. P. E. and his friends and C. B. C. and his friends are not so far apart as O. P. E. may think. If C. B. C.'s party had understood business matters a little better, and the absolute necessity of having banks in the United States and England to supply the loss of gold with bank debt, they would not have been so far behind O. P. E.'s party. By the way, what is the opinion of your friend who is writing the book with the new theories, to which, so far as you have brought them forward, I must confess that for all practical purposes you have converted me?

N. S. B. He thinks the time has come to settle by absolute and complete demonstration what is the advantage, by showing what is the proper function of gold in banking reserve. If this cannot be done, an issue of government notes to an amount agreed upon by all bankers, to be increased not more than one and a half per cent. annually in addition to carefully estimated allowance for diminution through wear and tear and losses, might possibly do as well as gold lying without any certain advantage in a reserve. He considers this an open question so long as O. P. E. and his friends command and control the opinion of the banking world, upon the subject of variation in reserve, expansion of circulation, bank credit or debt, as they call it, and liberating more gold, as the phrase is, by extending clearings. He says all the real contractions of even convertible currency have taken place after convertibility had stopped by the suspension of the banks, as in 1837 and 1857. He thinks those who maintain the necessity of keeping as much gold as has always been found in banking reserve, taken as a whole, in the United States, as well as those who maintain the necessity of keeping more, have been logically driven by the arguments of some of O. P. E.'s party to show what it is there for; how it ought to be kept, what relation it has in point of fact, and what relation it ought to have in point of science, to bank loans. His opinion is, that Mr. Bonamy Price, in his "Principles of Cur-

rency," is well entitled to say that his demonstration of the existence of an actual excess of gold in banking reserve, over and above what is needed in England, ever since 1819, is as complete as any in Euclid. There has *always* been a much larger amount, both in Great Britain and the United States, than was necessary to supply the loss caused by the outgoing stream of gold.

O. P. E. Why then does he not accept the demonstration, and if he can help the cause of true monetary science by another book in addition to all those we have now, show some plan by which clearings can be still further extended and gold saved?

N. S. B. He says that so far as the country, or even the commercial world at large is concerned, it is an utter delusion to suppose that gold can be advantageously saved by any further attempt at economy, and in proof of his assertion, he cites two instances in monetary history to sustain him, together with the opinion of Adam Smith. The first instance is that of Scotland about 1765–70, when bank-notes had taken the place of coin to the utmost practicable extent, and constituted at least seventy-five per cent. of the circulation. The circulation was in all, two millions, and there was in the country, both in and out of reserve, one million of pounds of coin. The other instance is that of the United States in 1857, when the whole effective circulation was about five hundred millions, and there were two hundred and fifty millions in gold, of which one hundred millions were hoarded. With merely convertible bank debt, at least one half of the effective circulation must be covered by metal including what is hoarded. The case of Scotland is one of a convertible bank-note currency without banks of deposit and discount; the case of the United States is one of both. Adam Smith's opinion was that convertible bank-notes (in Scotland) only took the place of a like amount of metal, which would otherwise be found in their place, and that their volume ought to be a little short of that of the metal, although in Scotland the notes rather more than occupied it. Hence, you may clear as much gold as you like out of bank-

ing reserve; you will not thereby diminish the total of the country at large. The more you save by clearing, the more you will drive into hoards.

O. S. B. What does he mean, then, by saying that Mr. Price has actually demonstrated an excess of gold in England?

N. S. B. He means, I suppose, that the influx of gold through what is called a favorable state of the exchanges and artificial rise of the bank's rate of interest, is not important in its bearing upon the discount market, merely because it furnishes the means of putting more cash or notes in circulation. He understands Mr. Price as in effect saying, There is abundance of gold already in the bank to supply circulation; if imported, it cannot go into circulation, and it is not wanted for actual consumption. Hence, if it is wanted for no other purpose, the importation is useless as well as expensive. Therefore his demonstration can be attacked successfully only by proving the premise that the importation of the metal is for purposes of circulation only to be false, because contrary to truth, or fallacious, because it does not contain the whole truth.

He thinks that if the only use of gold in banking reserve is to supply circulation to those who actually want gold, Mr. Price's demonstration is unanswerable, and upon the theory of double barter and commodity, he thinks the case might as well be given up, because to answer all the calls of those who want gold to use in "double barter," the supply is more than ample. He regards Mr. Price as having done good service to the cause of monetary science, by putting to thinkers and writers upon monetary science, this question, in effect: Of what use is gold in banking reserve, except to supply the calls of those who want it to put in circulation? If wanted for no other purpose, an excess is always kept, and the expense might be saved, no matter what would become of the coin, if not kept there.

C. B. C. N. S. B. has stated the case fairly. We have always used this argument to sustain our theory of paper money, either with or without the convertible-bond arrange-

ment, or attachment, as some of you call it. If the movement of gold by export and import, out of the grand consolidated reserve of the Bank of England, as N. S. B. calls it, has no effect in the way of making money, either less or more abundant, of what use is the movement, and why should the import be accelerated by raising the rate of interest? Paper money never moves unless the movement has some meaning. Banks always intend to check borrowing, when they raise the rate of interest; but here, rise in the rate causes an expansion by bringing in more gold. This expansion is the very opposite of contraction, certainly. Here, I must confess, is a riddle harder to solve than any the Sphinx ever proposed. With government issues and the convertible bond, paper given in exchange for bonds will always mean expansion, and the converse exchange, contraction. I doubt whether the political economists who favor convertibility and gold reserves, and oppose my monetary scheme and silver coinage, really know what they want themselves. When there is not gold enough in England to supply the circulation, and an importation seems nevertheless to have no effect because not wanted, they must use something else: it is that same pernicious bank currency, called deposits, which the banks of the United States have always dealt in, and are now contracting, when honest men like S. L. are begging for work.

S. L. It is astonishing that any one who hears C. B. C.'s arguments should remain unconvinced. It is a question of plain common sense: abundance of money must give abundance of work, and contraction of money must contract work. It must be to the interest of the banks to make hard times.

O. P. E. But as the imported gold is not used, while nevertheless its arrival is looked upon with satisfaction, as promising to make money more plenty, how does your friend expect to show that the premise of Mr. Price is false?

N. S. B. He has no such expectation. Assuming banking reserve to be kept in the right manner and upon the right principle in England, the movement of gold is, as Mr. Price states, without the slightest importance. Upon that assump-

tion, gold can be economized much more than it ever has been, and without any extension of clearing, a large amount can be "liberated." O. P. E. need not wait for that extension: he may liberate gold at once in very large sums. In fact, it is doubtful whether C. B. C.'s ideas, if modified somewhat, and made more practical, might not be advantageously substituted for the partially liberating process, by liberating gold altogether, and taking its place.

O. P. E. After all he has to say, as you state, about credit and clearing, would he turn paper money theorist?

N. S. B. By no means. He wants a system which will give a steadiness to production, as nearly as possible, like that of France. If writers like you, and bankers, continue to liberate gold, he thinks you might as well liberate it altogether, and agree to keep a steady reserve of sound government paper — sound, because issued in such amounts as to keep, as nearly as possible, the whole volume equal to the total of coin if kept and used as it ought to be. He thinks the volume should not exceed two hundred millions, and that the volume of bank-notes should be reduced to a like total, for that purpose.

C. B. C. That would make a contraction more severe than any we have ever suffered from in the United States.

O. P. E. He accepts the demonstration, then, on our side, but carries it so far as to exclude gold altogether.

N. S. B. Nothing of the kind. He merely insists that Mr. Price has demonstrated to every practical man the want of any effective relation between bank loans and deposits on the one hand, and bank reserve on the other, beyond the simple one of having always enough gold to meet calls, and that there is an abundance for that purpose on hand, independently of the movements referred to. Beyond this point, metallic reserve is not required under the English system of banking, as every banker in the United States knows it is not under the American. The same rule may be laid down in respect to all banking, and even the redemption of bank-notes, where the banks make no deposit loans. It was the only rule in force with the Scotch banks in Smith's

time. The banks of issue were only required to redeem their circulating debt in the shape of bank-notes in metallic money on demand, keeping as much or as little as they chose. Such is the rule which governs all English and American banks. The latter are required to redeem their circulating debt in metal, and their fixed or book debt in the same manner, unless they modify their liability by special contract. For the most part it may be said that the banks in the United States redeem their "inscribed" debt in bank-notes, and the English banks in gold. The American banks have both circulating and inscribed debt, and the English, for the most part, inscribed only, to provide for. With some exceptions, this may be laid down as a general rule in all countries where there are banks. The Bank of France is an exception, because it keeps a very large reserve.

O. P. E. Wherein, then, does he consider the demonstration at fault?

N. S. B. He does not consider it at fault, if the opinion generally entertained is true. He insists that those who believe that metallic banking reserve ought to be kept in the manner in which it is now kept, not only in the United States and England, but in every country where banking prevails (inasmuch as deposit banking, which means simply keeping depositors' money without using it, can hardly be said to exist now), are estopped by Mr. Price's demonstration from asserting that the influx of gold by importation, or the replenishing of banking reserve with additional metal, has of itself any relevancy to banking so long as the one condition before mentioned is maintained. In short, he considers Mr. Price as having, in a very forcible manner, demonstrated that there is no practical relation between banking reserve and banking accommodations save this one, that all banks must keep enough to meet calls; and as Mr. Price has clearly shown, and every practical banker knows, banks everywhere, as a general rule, keep a much larger amount than they need for this purpose. It would not be very wide of the truth to say that all banks, as a rule, keep more than twice that amount. The banks of New York, as every old

banker knows, closed in 1857 with full coffers. Such excess has probably always been the rule with the German banks. In fact, he thinks it may be laid down as a rule, that there is no definite relation, except the one stated between reserve and bank debt, in any form. The question raised by Mr. Price may therefore be said to relate not only to United States and English banking, but to that of the commercial world.

O. P. E. He goes farther, then, than we do. He thinks gold useless in the reserve. We shall never give up gold entirely. When the possibility of much greater economy is thus demonstrated, we only insist on availing ourselves of it by clearing. Economy of gold does not imply its abandonment.

N. S. B. That is true. But he insists that changes are continually taking place by the development of national industry, as well as by the continual advance of civilization. The advance of civilization, he says, is the advance of man's power over the raw material and forces of nature. The improvements in tools and machinery have facilitated the production, not only of those things needed to supply civilized and relative, but also absolute wants. This advance, like that which came by Promethean fire, is desirable in itself, when it moves so smoothly and evenly that it is not subject to sudden checks from the rude forces which limit it. Germany insisted upon having the golden apple of discord, and she received it with the French indemnity. Her loss is greater than her gain. The extension of banking and economy in gold has introduced her to banking and commercial crises, and her budget has a loan in prospect. Germany is politically strong, but she is now, through over-exertion and excess of monetary machinery, financially weak. She has wasted vast sums as the result. France, on the other hand, though politically weak, is financially strong, and, in a social point of view, not given to change. He considers the banking, commercial, and industrial depression of Germany, in its present extent, as accidentally occurring at the same time with that of the United States and Great Britain, for the reasons just given, although there can be no doubt that

independently of that coincidence, a general depression now exists throughout the commercial world. He says, furthermore, that the unparalleled industrial depression of the United States ought to be received as a practical demonstration of the fact, not that there has been too much labor expended, but too much in certain quarters.

O. P. E. You have merely referred to the phenomena and not to the operative cause. Where does he think is the flaw in the argument of those who maintain that the movement of gold is important for the purpose of supplying the needs of circulation?

N. S. B. He thinks it lies in the mercantile theory of intrinsic value in gold, silver, or any other money, which, although denied in terms, is admitted in fact; in the assumption implied by the terms Barter, Commodity, Standard, etc., that gold is an end in itself, therefore, instead of being only means to an end. That an import of gold makes discounts easier, and therefore money more plenty in the sense that bank accommodations are more plenty, is undoubtedly true. And he asks: why is it true? It is true, he says, not because the gold is needed for actual circulation, because there is enough already in reserve, and in fact much more. Not a sovereign of the imported gold going into the bank vaults is wanted for that purpose, and probably not a single sovereign will be paid out of it, and yet, the bank rate of discount drops, and "money is easier." What is the reason? The true reason, he says, is, that money is not a commodity; not a subject of barter; but a conventional arrangement of man's invention, controlled by, and not controlling him. Because it is a conventional arrangement entirely, it may, through the highly artificial arrangement of deposit loans, be used to excess.

O. P. E. Wherein lies excess upon his theory?

N. S. B. It lies in producing faster than selling, and in holding, by the aid of bank loans, too large an amount of grain and provisions, raw produce, and sometimes securities, in the shape of bills drawn against these. The temporary rise in price of domestic productions, of grain and provisions,

and raw material, in England, is the result of excessive loans which are made without any reference to their banking reserve, on the part of the London and other English banks. These loans raise the prices of all the merchandise on sale, first, by enabling those who have bought, to hold by the aid of bank loans, and secondly, by making, not the total volume or quantity of money in the reserve greater, but less, by expanding the circulation or power of paying out money in the purchase of goods, exactly in proportion to the expansion of loans. And here, Mr. O. P. E., if you will give up for one moment all prejudice and all pride of opinion, you can get a glimpse of the fallacy which has misled you and Mill, as well as Mr. Price himself, and induced you to suppose that a bank deals in ordinary credit. I think, however, I can furnish you an expression which will convey your real meaning better than the one you employ, and it is applicable to all bank loans, in whatever part of the world they are made. You do not really mean that a bank deals in credit, when you say so. Such an expression is really absurd, and I correct it in order to make your meaning plainer, even to yourself. What you mean is, that the bank loans a power to buy on credit, which buying is, in its character and in its effects, the same as any other buying on credit, where one merchant buys of another on time, and gives him a bill or note, or when he is merely charged in account. You hold that this is the only effect of the loan in the way of raising prices. You hold, therefore, — to use a common expression, — that money is no more plenty after the loan than it was before, or, if it is, that it is only in the shape of a power to buy on credit, which circulates. Which of these alternatives gives your real meaning? You have never defined it. It is important to the argument that you do.

O. P. E. I have not a very clear idea myself, I must admit, since you have driven me to an exact definition; but I suppose the meaning of the expression — that a bank deals in credits — to be, that the credit is the same with any other by which one is enabled to purchase. The borrower uses the credit to buy with, by means of a check, and the very

use of it extinguishes it, by setting it off against some other credit, or perhaps it might be said in different words, setting off credit against debt.

N. S. B. So I supposed. But you are all mistaken. The power of buying, which out of deference to you I will also call buying on credit, which a bank lends to A., is transferred by check to B. and from B. to C., and frequently it leads to the withdrawal of money from the reserve; and inasmuch as we both agree that the movement of the extra gold out of the reserve and back again is not itself the active cause of cheaper banking accommodations, it follows with a certainty equal to that of Mr. Price's demonstration, that "abundance of money" has resulted from paying up bank loans by some customers, which opened the way for more borrowing by others, and that this was the cause which moved the gold back into the reserve. But what caused this cause? It was sales of merchandise by those who were in debt to the banks. Did they pay with money borrowed out of bank? Certainly not, because, had they done so, they would only have created as much bank debt by borrowing as they could have extinguished by buying. *It is a sale for cash*, then, which demonstrates that the merchandise sold has gone into actual consumption at home, or been exchanged with other merchandise, to be carried abroad. This is the paramount cause, which has at one and the same time taken merchandise out of overstock, where it was held by the aid of bank loans, and contracted, not the quantity or volume of money, but what every man in his right mind, and not deceived by a fallacy of words and terms, knows has the same effect, — the power of putting in circulation, by the use of a check, money which stands to his credit in bank. To retire such a credit is precisely the same thing as to retire a like sum in bank-notes. Hence, all bank loans show an equal volume of merchandise held for sale; and sales for cash, or, in other words, the finding of consumers for all this merchandise, would, while paying all bank loans on the one hand, not only abolish all bank debt, and thus produce an enormous contraction, but while doing so, would, on the other

hand, produce an equivalent expansion, by an importation of metal, unless bank-notes were issued as bank contraction proceeded.

The paramount contracting force, therefore, in London, in the case referred to by Mr. Price, is the contraction of production by consumption. The exchanges of merchandise (commodities) are the real and operative; the money exchanges the auxiliary and subordinate movement. Bank expansion comes from production gaining upon consumption, and contraction from the latter gaining upon the former. When English goods are sold to be shipped abroad (and to suppose that they are either single or double-bartered for American or other foreign goods is equally a fallacy), the sale produces an equal bank contraction, and where American grain and provisions are imported, the discounting of the bills of exchange drawn against these in the United States produces an equal bank expansion in England. Whatever may be the volume of the total of English bank expansion, therefore, it comes from English production entirely, and it is neither increased nor diminished by the exchange of English merchandise, by means, not of barter or double barter, but of the two auxiliary and conventional money exchanges: first, of English goods for English money at home; and second, the sale of American produce for English money, which is laid out in English goods. Bank expansion is thus, so far, through the exchanges, both real and auxiliary, balanced in England by bank contraction. But London is the great international mart, and raw material and colonial produce may be purchased and held there by the aid of bank loans in advance of real exchanges for it, of English goods. This has the same effect in producing English bank expansion as a like amount expended on English labor. Because London is such a mart, English bank expansion, which is the total of bank debt over and above the total of bank reserve, may be resolved for the most part into two elements; first, the total of English labor which, by the aid of bank loans, appears in the shape of English productions which remain unsold, and the profits paid by the present holders; second, the

amount of colonial and foreign produce held in England by the aid of English bank loans in advance of purchases of English goods through bills drawn against such produce. The export of gold arises from loans to make purchases of bills or produce abroad at lower prices than prevail in London by reason of produce held out of market by the aid of bank loans, and the high prices caused by the expansion of the circulation of money in the reserve, or, in other words, bank expansion. The import of gold comes from reduced prices, caused by London sales of the produce for cash. The purchase of the produce causes bank expansion to the exact extent of the purchase; the loans which withdraw gold from the reserve cause an equal expansion. The former expansion occurs by increasing the power of circulating money as compared with the reserve; the loan which takes money out of the reserve, and thus causes an export of gold, has precisely the same effect. In other words, the movement of gold out of the reserve and back into it through one set of loans, has precisely the same effect as when, to save handling, no gold is actually paid out as the result of another set of loans, because it suits the convenience of borrowers, buyers and sellers, to let it remain. Hence, as my friend asserts, the reserve makes all payments which result from bank loans, and bank expansion is only the *result*. Bank expansion comes by taking from reserve, and bank contraction from adding to it. This arises from the conventional character of all money; a small as well as variable ratio of reserve being sufficient to make actual payments. Because of this conventional character, the important question is, not merely, — How much money is there in the reserve? but, What is the proportion of reserve to the total of deposit debt due by the banks to depositors; and what is the longest period in which this proportion varies from average?

O. P. E. This is something entirely new; in short, I may say, that at present it is all Greek to me, as the saying is. I may be able, after some reflection, to understand it.

C. B. C. It is worse than Greek to me. It is positively absurd. Of all things in my political economy, money is

the simplest. Even S. L. understands it fully. He knows as well as I do, that everything but money is plenty. Make money as plenty in proportion as all other things, and then you will have true harmony of production. This is the quarter where proportion is at fault, and not in banking reserve and bank debt. To a man who has studied money a long time, like myself, and therefore ought to know something about it, this proportion between reserve and debt is a mere cobweb, woven to conceal some banking scheme. No practical man will give it the slightest attention, and even S. L. perceives at once its absurdity, as well as myself and O. P. E. It is designed to make money more scarce instead of plenty; and, therefore, as a plain practical man and writer, I oppose it. It is equally opposed to the ideas of O. P. E. and his friends, in respect to bank credit and clearing. There is a touch of irony in N. S. B.'s remarks upon these subjects which affects O. P. E. as well as myself.

N. S. B. There is no attempt at irony. If there is an appearance of it, it results from the mere statement of the different theories. There is irony enough for me in C. B. C.'s statement of his views and those of his friends, and he certainly states them more clearly and strongly than I ever heard them stated before. He has made, on the whole, an able argument also, in favor of convertible bond-currency. The real difference between C. B. C. and O. P. E. is, that they both make money man's master, instead of his servant. They both make the auxiliary exchange of the conventional commodity, money, paramount, when it is only subordinate to the real exchange of commodities which he makes in order to satisfy his artificial as well as natural (absolute) wants. He made money: money never made him. The exchanges, and therefore the production, which are necessary to supply all his wants, relative to civilization, as well as absolute and independent of civilization, must be made by means of an auxiliary exchange which money furnishes. Every purchase is a sale, and every sale is a purchase. He invented money, or, in other words, a process for exchanging those things which he needs, by putting money in the place of one of the com-

modities or the commodities and labor to be exchanged. To exchange one commodity directly for another is barter. To maintain the exchanges he required, it was necessary to get rid of direct by substituting for it indirect barter. This he did by making one commodity universally receivable in exchange for all other commodities and labor. This gave the former a conventional value, while all other commodities have a real value growing out of the wants to be supplied; and the demand for them is the result of those wants. Hence, all the money in banking reserve, whether it consists virtually of gold, as in England, or bank-notes and gold, as in the United States, is deposited by those who have received the conventional commodity, money, for real commodities or for labor. If loans were never used to pay for labor either directly or indirectly, but only to buy commodities, deposit loans would not exist. Deposits over and above reserve constitute the total of bank loans, and this total is the amount which has been paid to labor, whose accumulated results are found in the merchandise produced by the aid of bank loans, *plus* the profits of the capital which has employed labor to produce it. Had the labor not been paid its wages borrowed by the aid of bank loans, the credit profits of capital, which are registered in deposits, would not have existed to increase the total. Labor's results thus produced by the aid of bank loans must be exchanged for the results of other labor not produced by the aid of bank loans, before deposit debt over and above reserve can be liquidated. The latter results are embraced for the most part in the absolute necessaries of life, which are annually consumed. They are purchased, it is true, by the aid of bank loans, but not until they are produced, and the annual consumption enables the borrowers to pay. The exchange of these products for the others continually reduces the volume of bank debt. It is the constantly and slowly increasing surplus of the results produced by bank loans, which causes bank expansion above average: the actual exchanges increase the reserve. Hence the movements out of the reserve consist of money withdrawn by producers and buyers to pay labor, and

to buy merchandise intended for consumption: the movements into the reserve consist of the same money returned by sellers. One stream must always very nearly balance the other, and clearing is only setting off one current against the other to save handling. The adverse balance comes from the very slight but constantly increasing excess of the outgoing over the incoming stream. This excess increases regularly during all the years of bank expansion, and makes the adverse balance against production, which is constantly and slowly accumulating in wages paid to labor over and above sales of labor's products, and profits thereon paid capital for its share in the result. If labor never used its surplus earnings to increase the glut, and capital never drew its check to employ these profits in speculative undertakings, and loans to those who engage in them, until labor's products were sold to consumers, the result might be only a commercial, banking, and industrial crisis on a moderate scale, without causing so much partially unproductive investment of labor everywhere in the improvement of cities and towns and in the building of mills and of railroads.

The important movement, then, before a crisis, is that of the reserve, in the slowly progressive diminution of its total as compared with bank debt. When its total is increasing, on the other hand, slowly and regularly, as compared with bank debt, consumption is gaining upon production; labor is receiving less wages, and capital less profits than they received while the expansion of overstock and bank debt was progressing. Having received more than their share in the economy of exchanges, for a time, they must now, for a time, receive less, while the reserve, which mirrors all the exchanges, is now increasing in excess of average. Production and consumption balanced, are reflected in the reserve, therefore, by an even ratio of reserve to bank debt: consumption then maintains the reserve at average, and production maintains bank debt at average. The premise of Mr. Price must therefore be amended, by stating that it is true that the money coming into the reserve is not needed to supply the loss occasioned by the slight excess of the outgoing above

the incoming stream, and might therefore be locked up indefinitely; yet its movement into the reserve is an essential part of the machinery of exchanges, and the objective point of perfection is to maintain that stream at the same volume with that which moves from the reserve, because banks deal in their reserve and not in their own debt: their debt is only the registered movement of their reserve. This is the premise of Mr. Price as it must now stand amended by those who maintain that the movement of the gold back into reserve has any relation whatever to bank loans or to bank debt. It is not needed to-day for actual use in the way of being paid out to the depositors of to-day, nor will it be needed to-morrow to pay out to those depositors who will to-day or to-morrow become such by reason of credits placed to their account through loans made meantime by the bank. Whether the bank is a member of a clearing house, or whether a clearing house exists or not, is perfectly immaterial; the gold thus returned may in nine cases out of ten be indefinitely locked up. It will not be wanted even in a banking panic, for it can then supply but a small portion of what would be needed to meet all calls in metal. Until a banking crisis comes, — and whether with or without panic is immaterial, — a very small part of the reserve will supply the outgoing current, because its excess over the incoming one is so small, that overstock will cause a crisis and therefore change the excess in favor of the incoming stream, long before the reserve can be exhausted. This is well known to all bankers, whether they understand its import or not. In a bank of deposit containing all the deposits of London, probably nine tenths or more of the total deposited might be locked up, and one tenth would be a reserve sufficient to meet all checks. Less than five per cent. of the total, it may be, would be the daily volume of the outgoing as well as the incoming stream, making the total in transit less than ten per cent.: perhaps five per cent. would cover the total volume of the two streams. If the bank be converted into a deposit and discount bank, and uses ninety per cent. of the total in loans, the principle is the same. The eyes of O. P. E. and

C. B. C. and their friends, as well as of people generally, are blinded, by confounding the auxiliary with the principal exchange. The question is not, How much money will supply all the commercial exchanges of the community, whether there be or be not banks, bank loans, checks, and clearings? but, How much money will the real exchanges naturally keep in the reserve? It is not the exchanges of money which move real commodities, but the exchanges of real commodities which control the movements of the conventional commodity called money, as an auxiliary.

C. B. C. I begin to catch a glimpse of what you want to show. You want to show that owing to the fact that money is not a real commodity, there is danger of its being used as a conventional one, in exchange for labor to produce some real commodities, oftener than it is used in exchange for labor to produce others, or to pay labor after it has produced them. You think the banks have done all in their power in the way of lending, and that they are still able and willing to lend, if they can find people who are able and willing to borrow; but the results of labor and capital have been piled up so high already, by the aid of bank loans, that time is needed to reduce the total by cash sales and consumption; that capital and labor must therefore moderate their movement to enable consumers and cash buyers to catch up.

O. P. E. The question is one of international importance, I admit. It applies, according to N. S. B., more particularly to some nations than to others. But if N. S. B. is right, old political economy must be set aside, or constructed anew, with so many modifications, that its friends will hardly know it. In order to establish his theories about harmony and discord in production, and the nature of money and banking, it will be necessary to get rid of the theories of myself and friends. There is not a graduate of a college or high school, who has not been taught that money is a commodity, giving rise to double barter as a development from and an improvement upon the single barter of savages; not one who has not been taught that banks deal in their own debt and credit, just as merchants deal in mercantile debt and credit;

not one who has not been taught that checks, drafts, and bills of exchange, and sometimes promissory notes, constitute with mercantile and bank credits and debts, "the great volume of credits," which moves of itself, — I cannot explain how, — to settle the great transactions of commerce, while the small ones are managed by bank-notes and specie. There is not an under-graduate who has studied political economy or heard lectures upon it; not a single professor, and not one banker who has any opinion at all, who does not believe what may be called the English credit theory, — which all our books teach, — that there is perfect harmony, where he says there is discord, in production; not one who has not been either taught, or, through clearing, converted to the theory that the great transactions of commerce, being settled by credits, have no relation to the reserve whatever; that deposits arise from sales, and banking and commercial and industrial crises, from speculation. Most of them believe that gold is a standard, and that the premium on gold is the measure of the depreciation of an inconvertible currency, after the opinion of Mill. N. S. B. and his friend have a hard task before them, to make all these people believe that there is any such thing as overproduction; and if they succeed in that, they will have a still harder one to make them believe that a duly proportioned metallic reserve will help to maintain harmony, whatever Adam Smith may have thought about the necessity of keeping bank-notes in due proportion to gold and silver. That, they will say, is a very different thing from debt by book. With the former in use men buy for cash; with the latter they buy on credit.

It will be harder to get rid of our old science, if false, than to establish a new one, even if true.

Still, I think, in these times all theories ought to be examined, and I am willing, if our names are carefully kept out of N. S. B.'s report, to discuss briefly at another meeting the differences between the old theories and the new ones; especially as N. S. B. and his friend say that the principles of the science are modified in their adaptation to different countries. This is something I never heard of. I propose,

therefore, that we now adjourn and meet a week hence at the same hour, to discuss this subject. As none object, we will adjourn, and the next subject shall be called —

THE POLITICAL ECONOMY OF THE EXCHANGES OF MERCHANDISE THROUGH THE AID OF THE AUXILIARY CALLED MONEY, AS IT EXISTS AND AS IT OUGHT TO BE MODIFIED IN FOUR GREAT PRODUCING NATIONS OF THE WORLD, — ENGLAND, FRANCE, GERMANY, AND THE UNITED STATES.

O. P. E. We are all here to discuss the subject agreed upon at our adjournment. Upon reflection since that time, it seems to me that N. S. B. is right in taking France as the country where prices are steadiest and where the least speculation is to be found. Every man who has money in France, believes that he has a commodity, quite the same as if he had the amount in bullion or plate; and N. S. B. and his friend will never convince him to the contrary. But it is painful to an economist to think of the total absence of economy in paying for and losing the interest on so much costly metal, when the introduction of banks, credits, and clearing, would relieve the banks of more than half their useless load, by putting it at interest or investing it in new business.

Is not this matter of steady prices and steady production N. S. B. talked about, a delusion, after all? If bank and mercantile credits, checks, bills of exchange, drafts and notes, constituting the whole volume of credits, make gold, except in small amounts, unnecessary, is it not barbarous to hoard it in such quantities? Does it not carry us back to the Middle Ages, and even beyond them? Still, if we assume that such hoarding is attended with steadier prices than prevail in England and the United States, as N. S. B. and his friend say, it must be because gold and silver are, as money, commodities, as we know a ton of copper, a ton of iron, and a horse, to be. It must be double barter that gives the superior steadiness, if that supposed steadiness is not, as I assert it to be, in point of fact, a delusion. If metallic commodity and double barter do not produce this steadiness,

which, for the present we assume, as we are now, agreeably to my proposal, considering in the first place the economy adapted to France, what can? N. S. B. and his friend propose the new theory that money is not in any form a commodity. What reasons can they give, then, for the assumed steadiness of metal? For the last week I have been running over half a dozen books, — three by our American, and as many by English professors, — and comparing the text in each with that of my own, which, without vanity, I may say, is used as a text-book in the United States, upon the allied subjects of money and credit. All of the writers, confessing that bank-notes are only a form of credit, admit that in point of science they ought not to be called money, but only a form of credit. They only call them money in conformity with popular usage. I, myself, repeat the assertion, with a stronger emphasis on that portion of it which affirms the notes to be only a form of credit. The borrower delivers to the bank his form of credit in the shape of a bill of exchange, or note promising to pay a commodity, that is to say, money; the bank, deducting from that amount a certain sum by way of premium on difference in the exchange of credits, gives the holder of the first form of credit its own form, in the shape of bank-notes. These are both forms of credit, but that of the bank is the best for use. Here lies the only difference between them. The last is called sometimes the most potent form of credit, but that is merely because it is most used. Thus A. borrows of a Boston bank ten thousand dollars in bank-notes, less discount. Assuming "specie payments" to have arrived, he makes his note with an indorser, at ninety days. He promises to pay the bank ten thousand dollars in gold coin. Every one of these dollars he promises to deliver is a commodity, like a bushel of wheat, a cow, a horse, or a ton of pig iron. The bank gives him in exchange, after deducting premium in favor of its own credit in the shape of discount, ninety-eight hundred and forty-five dollars, in notes of different amounts. These notes, when paid out to various persons in exchange for labor, for wheat, bread, flour, provisions, iron, and horses, are contracts to

deliver a commodity called money, on demand, to those who furnish the other commodities named, or any other that may be wanted, in exchange for the notes. Hence it is only single barter, after all, where any form of credit is used. Where gold itself is used, it is a case, however, of double barter. This every one has to go through before he can get what he wants, if he uses gold: and double barter gives gold its steadiness as money. I have furnished you a rigorously exact statement of our views. As we are now in France, take notice that we are in the land of double barter, even in large mercantile transactions. Credit is used undoubtedly, but to a comparatively small extent. But I must confess that double barter seems barbarous to me except in the smallest retail transactions. All that France saves by using double barter so extensively is in regard to speculation.

N. S. B. Did the people use the system of single or double barter when they retired their commodity and used bank credit altogether in France?

O. P. E. That very question arose in my mind, but I forgot to examine it. I will do so in the next edition of my book.

N. S. B. Your definition is very full. You all say that the exchanges between different countries are made by single barter. Of course, therefore, France makes hers in like manner, notwithstanding her stores of metal.

O. P. E. Undoubtedly it is all barter.

N. S. B. Suppose the wheat crop of France to be a little short, and while the French are buying in New York, American dealers ship wheat to Havre, and draw bills of exchange against the cargoes, directing the consignees to barter the wheat for velvets and silks, would it not take them by surprise?

O. P. E. Of course it would: that is not the kind of barter we mean. We are logical and you are not. We mean that the merchandise exported is equal to that imported, except balances: the mercantile theory about always having the balance of trade is absurd, and one nation merely exchanges its products with another.

N. S. B. Is not that precisely what takes place at home? Have I not, over and over again, said that the principal exchange of real commodities controls the subordinate one of money? But all exchanges are alike. If it is barter internationally, it is nationally. In point of fact, it is barter in neither case. There is in all cases a conventional commodity on one side, and a real one on the other. All trade is alike, because it is a whole consisting of many parts. International and national, wholesale and retail trade, constitute the respective parts. Money in all its forms is but one process: steadiness in the exchange is the thing to be desired, and with a currency like that of France is certain of attainment, because loans cannot be made fast enough to create excessive overstock in any part of the productive field. As to your assertion that barter takes place between nations because only balances are paid in metal, would you expect a farmer, when taking a load of wheat to market, or a merchant in shipping it, to carry with him, or to ship the price of it in gold? He expects to find the money in the market where he sells. Such loose talk about barter would be ludicrous if it had not really taken the name of science.

O. P. E. You use great plainness of speech; but it is right, inasmuch as it is not personal. You will have a fine time of it if you undertake to support the mercantile theory.

N. S. B. That is the very thing my friend and I are opposing. You oppose what we call some of the logical inferences from it; we oppose the theory itself as matter of science, deeming its effect really beneficial in France, but pernicious when in such countries as England and the United States it prevents you from perceiving the importance of taking France as a model of steady prices, and endeavoring with the means at hand to approach as nearly as possible to them.

C. B. C. What is the true cause of French financial prosperity? I and my friends have always called it the large volume of money, which gives her such an enormous *per capita* circulation? I do not believe there is any other

good reason, but if there is any other, I should be glad to hear it. I suppose that I believe in the commodity and double-barter theory, but I believe any kind of money is good if there is enough of it.

N. S. B. My friend wants to put the science of production and exchange upon a solid foundation, by investigating causes instead of effects. He makes man the actor instead of the thing acted upon, and hence he makes those things which supply his necessities, natural and acquired, paramount to the instruments, by the aid of which they are supplied. He regards national prosperity as a relative term, and wealth as a condition. National inequalities in the capacity and circumstances of the actors are the principal causes which make their several conditions unequal; but this leads indirectly to progress on the part of all. The exaggeration of this inequality through our bad monetary system has of late developed a madly destructive tendency, new to this country.

Were money a commodity, prices in France would be as steady as they now are, but the people would be in a savage state. Were money a commodity, and the people, by supposition, as civilized as now, a Frenchman might send his silver five-franc pieces to London and barter them as bullion for English goods, without the loss of a single centime, instead of exchanging them first at a loss of fifteen per cent. for a much smaller quantity of English coined silver. Silver has fallen in London precisely as much as gold has risen, and therefore if metallic money is a commodity, he ought, in making his purchases, if the English are willing to take his five francs as money and commodity at the same time, to lose only seven and one half per cent., as compared with prices when one pound of gold was worth fifteen and a half of silver. In point of fact, however, he could not use his francs as money at all, and if he had a large purchase to make, it would cost him fifteen per cent. to convert his silver into English silver or gold money, and then he would find prices relatively, — mark, I say relatively, — unchanged. The stopping of free coinage, called demonetization, for want

of any better word, has had no effect whatever on the price of gold or silver in exchange for all commodities other than themselves. It has seriously affected the barter relation between the metals, however, and that is the cause of the Frenchman's loss. It is precisely the same in his own market at home. The barter rates of gold and silver are the same there as in London. Although the barter rates between silver and gold have changed to the extent of fifteen per cent. in all against silver by the rise of gold seven and one half per cent. above the old rate of 1 to $15\frac{1}{2}$, and the fall of silver seven and a half per cent. below it, it is in the distant future that, as money, gold will gain or silver lose as compared with other commodities; and it is quite possible that neither of them will gain or lose one per cent. If all Frenchmen who keep their own gold and silver were required to weigh it before receiving or paying, the government giving up coinage altogether, the principle would be the same. Gold and silver pay as units precisely like bank-notes: the essential difference is in the limitation of possible numbers. This is the cause of the difference between the relative values of gold and silver bullion reckoned in each other as material to make the money unit, and the value of either metal in the shape of units of metal paid out in exchange for other commodities, which I have just explained to you. Exceptional reasons, however, such as I have given, aside, the metal in a coin is always worth in market, to sell as bullion, an equal weight of uncoined bullion, because the coin cannot as bullion be more or less than an equal weight of bullion. On the other hand, the bullion is worth at least as much as the coin, less cost of coining, or, in case of absolutely free coinage, a small amount of interest. The reason why the barter rates between gold and silver have changed, lies chiefly in the quantity of metal formerly in the shape of silver coin now thrown upon the market, the falling off of the demand for coinage through the demonetizations, and the probabilities of the future as estimated by bullion dealers, because, independently of these considerations, the difference between the ratios of silver product to total silver

mass, and gold product to gold mass, for five years past (the true ratios of comparison upon the unit theory), is less than four per cent., and this difference would have been balanced by coining and manufacturing more silver than gold. Low prices in Europe have not arisen from any rise in gold as money, but the falling off in production, and, consequently, in the circulation of money. The reason generally stated why gold cannot have risen, nor silver fallen, as money, is, that prices, as reckoned in one or the other, are determined by the total number of units in existence, the total economy of metal through the machinery of banking, by the use of bank debt, whether by book or note, and the changes in the circulation of money, caused by expansion and contraction of production. This economy makes, in point of efficiency, an enormous addition to each total of metallic units paid out, and this efficiency is wholly misunderstood by O. P. E. and his friends, because they either do not assume in their investigations, or, assuming, do not carry out to its logical results, the conventional character of all forms of money. They convert this efficiency, through economy of money in banking reserve, into a chaos of "credits." They confound bills of exchange and checks with the total of deposits which limits them, and make bank credit something that has an existence independently of any reserve. The rise of gold and fall of silver have not changed the purchasing power of either metal as money, because, assuming the existence of five thousand millions of dollars of gold and a like sum of silver money, and assuming gold to have risen on the average seven and one half per cent., and silver to have fallen seven and one half per cent. in relative barter rates, the first condition essential to raise the purchasing power of gold seven and one half per cent. is to add by coinage three hundred and seventy-five millions to the total of silver, and retire into bullion and out of coinage a like sum in gold; to coin seven hundred and fifty millions of silver, without retiring any gold, or retire seven hundred and fifty millions of gold, without coining any more silver. One of these three alternatives is needed to furnish the conditions nec-

essary to change the present relations between the purchasing power of gold and silver to the extent indicated; and if we allow fifty per cent. for increased efficiency through economy, then, instead of seven hundred and fifty, we shall require eleven hundred and twenty-five millions. The total production of either metal, for years together, is a small matter compared with the total accumulation. If all commodities were as indestructible as gold and silver, and were only needed to make exchanges, the mass of each would be continually accumulating, as silver and gold have done, and the annual production, whether small or large, for years together, would not materially affect exchangeable values. Because used only for exchanging and not for consuming, the relation between different commodities would then be that of numbers of units which the total mass of any commodity could furnish by weight or measure, as compared with another; and values of commodities reckoned in each other would rule accordingly. This is precisely the barter relation of silver and gold as material to furnish units of money at the world's chief metal mart in London, and everywhere else. It is the vast accumulation of metallic units of either metal which keeps prices so steady when reckoned in one or the other. The ratio of annual increment diminishes as each mass is continually growing larger. Such is also the case with the world's commerce: the annual increment is small compared with the existing total. This relation is one that is involved in the question of the remonetization of silver, when that question comes up in due time. But in order to make the purchasing power of the units of either metal steady, they must be allowed to remain where that commerce, whose increase has been in such wonderful harmony with their own, has left them. This is substantially the case in France, and if so, when we come to England, it will necessarily follow, that to maintain like harmony as near as we can, we must abandon the idea that gold and silver coins are ordinary commodities; and because we have seen that economy counts for a like amount in metal, we must fix that economy as nearly as possible at a definite

figure within short periods. In France the variations in the total of money are slow and regular; the production and consumption, and the social habits and economy of the people, are also regular. There is steadiness of production and of prices. There would probably be less steadiness with such a currency, if used by either Englishmen or Americans, but nevertheless there could be no banking, and therefore no commercial and industrial crises, as we know them.

O. P. E. Prices certainly vary in France as everywhere else. A heavy crop of wheat brings low prices, and a light crop high prices of that grain.

N. S. B. Exactly so; and you have thus furnished the best possible illustration of the great difference between units of gold and silver in their character of money, and unit bushels of wheat. Wheat is, on the average, consumed mostly within one year after it is produced. Hence annual variations in crops make quick changes in prices, while upon the long average prices are steady. Wheat, therefore, would be unfit to furnish units of money, independently of its bulk. Gold and silver are the steadiest of all things in the world, if not banked. In bank, they are as unsteady as the units of paper money, because the world of science and the practical mercantile world have not as yet learned what money is; and not only so, but they still insist that to one half the commerce of the world (wholesale) the reserve bears no relation at all, while it does bear a relation to the other half (retail). This is like separating a steam engine into two parts, with the idea that they will work better when separated than when united. This is cutting commerce (which is a whole consisting of two parts) in two upon the supposition that each part will work by itself, and at the same time with the other, although separated from it.

O. P. E. You would not introduce banks into France then?

N. S. B. The people have settled that question: if they want them they will have them. At present they are better without them until this question of banking reserves is settled, as it must be.

O. P. E. What do you say to teaching the doctrine of the impossibility of overproduction in France?

N. S. B. It is false, but comparatively harmless there, because the natural tendencies — the action and reaction, the loss within very short periods, which would be demonstrated by it, could production and commerce be maintained at its present volume without the auxiliary exchange of money — are not materially changed by their simple monetary system.

O. P. E. What do you say to teaching, any longer, in France, our old mercantile theory of money as an ordinary commodity, having an end in itself like a cow or a horse?

N. S. B. It is false, but harmless; and not only harmless, but it tends to thrift. If all currencies were exactly like that of France, the mercantile theory of money as a valuable commodity intrinsically; an object in itself, man being its subject; and the theory of perfect harmony in production as expounded by that great scientist, M. J. B. Say, would be, in a limited and relative sense, true.

O. S. B. I am a listener, desirous of learning. France has been pretty well surveyed; let us leave for Germany.

N. S. B. Germany has furnished of late a practical demonstration of the truth of what has been said. The conditions of national prosperity are not merely large results in gross, but harmonious results. Germany has produced largely, and has fed all classes of producers. To use C. B. C.'s expression, her granaries have been bursting all the time, as he says those of the United States are now. Improvements in agriculture in the way of increased product as well as economy of hand labor, have been made, but these, instead of tending to harmony of production, tend the other way. The French indemnity and the multiplication of banks have deranged both production and prices, and introduced Germany to an acquaintance with national debt.

C. B. C. What, then, is the kind of political economy for Germany according to your new system?

N. S. B. Germany ought to learn, if possible, the conventional character of money and the fact that harmony of production is not absolutely, but only relatively true; and that its relative truth is the cause of the crisis under which she is suffering: the crisis is itself the process of rectifica-

tion. To restore equilibrium while still retaining all the new productive ability she may have acquired, she needs to learn the lesson that the natural tendency to equilibrium by mutual action and reaction, between the limited production of absolute and the comparatively unlimited production of relative necessaries, is endangered by the use of the indispensable auxiliary exchange of money. A metallic currency unbanked, is the most perfect, because its units are equally distributed with those of commodities, and in order to approximate this distribution, which she has lost through the introduction of so many banks, she must make metallic money a definite part of her currency, both in volume and circulation.

O. P. E. I suppose you would put Great Britain and the United States together. The economists of both nations are perfectly agreed about commodity, double barter, credits, and reserve. They only differ, I think, about labor as a measure of value, and possibly as to gold being a standard by which to ascertain the depreciation of inconvertible currency. Some speak with doubt, but the majority consider it a perfect measure.

N. S. B. This branch of the subject we have already discussed. The practical lesson to be learned, before attempting to do away with the fallacy that gold and silver coins are commodities like wheat, cloth, cattle, and iron, is, to go back to Adam Smith, and forget, if possible, all that has been taught since. Adam Smith insisted that bank-notes ought not only not to exceed the volume which would in their absence be filled by gold and silver, but that they ought to come a little short of it. Having fully learned this lesson, the next lesson is one of fact. Do the banks of the United States, even when their notes are convertible into gold on demand, maintain in their coffers a metallic-bank-note redemption reserve, varying at short intervals? This is the true and only test of their being within the law of Adam Smith. The next and third lesson O. P. E. and his friends, the economists of both countries, have to learn, is, whether upon principles of sound reason there is any difference between the variation of gold in their banking reserve

as compared with bank debt by book, and the variation between gold in bank-note redemption reserve and the outstanding volume of bank-notes. The former is even more important than the latter, for reasons already given, but can any writer or banker give a sound reason why it is not at least as important? In the former, notes take the place of so much gold; in the latter, gold is economized. The economy of gold ought to be a certain quantity, as much so as the volume of bank-notes.

O. P. E. What else have they to learn?

N. S. B. That production and not commerce, national or international, is the source and origin of deposits. All production gives rise to a money exchange to pay for labor, and when the products of labor are consumed, there ought to be within short periods, so far as actual commerce, which means actual exchanges of commodities, goes on, a reëxchange of the money paid out to labor for labor's products, thus balancing the first exchange by the second, and returning the money to the lender. This is contraction of circulation, which ought, within reasonable limits, to follow the contraction of commodities through consumption. When they have learned Adam Smith's lesson, and have come to the conclusion that this lesson is applicable to the banking reserves of their own bankers, the next lesson to be learned is, that bank expansion does not come of itself as a mere system of credits. It is not a cause: it is only the result of money paid out for labor faster than labor's products will sell, and the rise of prices is a phantom which lures the producer on to more production, until rectification comes by a crisis.

C. B. C. What difference can it make to the American producer whether prices are high or low, if money is abundant? If prices are high, there is a compensation all around: one commodity alone does not rise, but all, including what he and others produce, rise together.

N. S. B. Suppose general prices in England to range relatively lower than in the United States. Wheat is thus relatively cheapened in the United States by the action of England as one of the parties to the bargain, and the American

manufacturer has to pay the producer of wheat higher on his remaining produce which is sold exclusively at home. Again, suppose he owes the banks fifty thousand dollars for money paid labor directly and indirectly, by the purchase of raw material, for which he has to show, as the result, cloth, which he values at sixty thousand dollars. A crisis brings it to auction, and it is sold for forty thousand dollars. Has he not lost by contraction more than he ever gained by expansion? What he loses, he loses by unduly expanded production, made possible by the expansion of the circulation of money. The units of money and of goods are the same as when he bought: the real contraction is in production and consumption. Again, wheat is now worth as much as it has averaged for the last seven years, but iron and cloth have, taken together, fallen one half in price. The nominal and the real price of both wheat and goods now coincide, through the operation of the paramount forces which, sooner or later, control the movements of money, and place values in their true proportions. The crisis is not caused by a destruction of means. The enormous destruction of means did not bring on a crisis at the close of the late civil war in the United States, nor in England at the close of the wars with Napoleon, in 1816. A crisis is a banking, commercial, and industrial affair, and comes because the producers are in debt and cannot sell. What is wanted is to bring banking reserve into harmony with all commercial transactions, wholesale as well as retail, so that when A. draws his check it will be specially limited by his own credit, and generally by the total of bank debt, while the latter will be limited by the reserve. Bills of exchange will be limited by merchandise, and merchandise by the ratio of reserve to bank debt. Merchandise will still be produced by the aid of bank loans, but production will be kept in subordination to actual markets, instead of being allowed to proceed so far in advance that a crisis is the only method of rectification.

O. P. E. What would you lay down as the law in relation to the origin of deposits for the United States, in the fewest possible words?

N. S. B. They arise from production on credit, and not sales. If they arose from sales only, your doctrine, or rather the doctrine of some of you, — for instance, Mr. Price, — that there can be no excess or inflation of bank-notes, as he calls it, would be true, because it is a logical inference, from your and his theory, that deposits arise from the sales of commodities. This is true only in the subordinate sense that you may sometimes arrive at a partial view of truth by arguing from effects, instead of going back to causes. This partial method makes your science entirely imperfect. If deposits never arose until merchandise had first been produced, paper money would give steady prices, without being made convertible. Its purchasing power would be maintained steadily, because it could never be paid out for labor and profits of capital, until they had jointly, by the mutual aid of each other, produced their merchandise and brought it to market. This would be a continual guaranty to the banks loaning the paper that it could not be exchanged for merchandise by A., the borrower, or his laborers, without being shortly afterwards reëxchanged for the merchandise A. produced, so as to enable A. to pay his debt in bank.

O. P. E. You assert, then, that unsteady prices result from the fact that loans of money are made by banks to labor and capital before producing, as well as to buyers who, as merchants, step into their place by purchasing the product.

N. S. B. I not only assert this, but I add that deposits arise entirely from money paid out of the reserve to labor and capital, to produce that which is continually in excess of consumers' markets, to the amount of the average volume of deposit loans, less loans made to those who turn out to be unproductive consumers. Loans made to buyers of agricultural produce, exclusive of the raw material which labor and capital have worked up, diminish reserve temporarily, but in a short time, and as they are sold to consumers, restore the reserve and at the same time reduce bank debt, by enabling borrowers to pay. Labor receives bank-notes in advance of sales of its product, and capital receives the same, or a credit.

Both diminish the reserve by diminishing its ratio to bank debt. Labor expends a large portion of its earnings and production of its profits in order to live. That portion is redeposited and increases bank debt as much as it increases the reserve: and so of savings deposited in savings banks, and by the latter in commercial banks. The profits of capital result largely from sales of overstock to merchants, who pay by the aid of bank loans, and diminish the reserve by increasing bank debt. Aside from these profits, the sales of overstock neither increase nor diminish either bank debt or reserve. They only give the banks a new set of debtors for their old ones. The reserve is the money deposited from proceeds of sales in consumers' markets; bank debt is what the banks owe for depositors' money loaned. To fix the ratio of bank reserve to debt is, therefore, merely to stop using the money of commerce in loans to pay labor and capital, after loans have reached a certain point. The political economy of the United States and Great Britain for their benefit as nations, for the benefit of the whole commercial world, for the comfort of labor and the safety of capital, instead of teaching that there can be no overproduction, ought to teach that it is not only possible, but that it has been the cause of great injury and loss, morally and physically, especially within the last few years, in the United States. It ought to teach that bank expansion arises from this cause; that real loss always follows overproduction, but loss is for a time disguised by the expansion; that gold and silver do not of themselves possess steadiness, nor are they a standard, although in their character of units of money distributed by commerce, they are the safest and steadiest of all money, and therefore Adam Smith's lesson ought to be well learned, and applied to all banking reserve. It should teach that deposit debt is not money, but that the reserve is alone money, — the money of commerce, — always more than sufficient to furnish units of money to make all the purchases depositors would make if they had their respective deposits on hand in gold or bank-notes, after producers on credit have been supplied with an additional fund over and above what

they could have, were there no deposits, equal to the difference between total deposits and total reserve.

C. B. C. If you are in the light, Mr. N. S. B., then I am entirely in the dark, and so is O. P. E. You say that the primary cause of the present distress is the want of harmony in the exchanges between the products of labor, and that a rectification of the exchanges is now going on. If that is really so, greenbacks and convertible bonds piled mountain high and capped with silver, would not, if placed in the scales, rectify the balance any more than the gods in the fable could draw Jupiter out of heaven by a golden chain. If you are right, I have the satisfaction of knowing that I am more logical and consistent than O. P. E., with all his irony about greenbacks and convertible bonds. He says bank credits are like mere mercantile credits set off against each other, and he and his friends declare that they are never in excess of commodities sold to consumers. If he is right, there can be no such thing as an excess of loans, and therefore no excess of bank or government notes. I agree with him that there can be no excess of commodities through bank loans, and hence there can be none through any other loans, whether made by the government or not. I perceive now that when he is talking about bank credit, he is, although he seems not to be aware of it, really talking about money all the time. If he could carry out his fancies about universal clearing, he would give gold a clear riddance out of the world of commerce. He and his friends have already done it but in name. They say the gold in the reserve has no relation to, and no connection with, bank credits and clearings: gold, they say, is a good thing at retail, but useless at wholesale. It really seems to me that N. S. B.'s argument is unanswerable. How, he asks, can you cut commerce in two, and have one kind of money at retail and another at wholesale? Would it not be quite as reasonable to say that commerce has one kind of goods at wholesale and another at retail, or to suppose that a steam engine can be worked in two separate parts? I still adhere to my theories about production, labor, and money, but I am at least consistent. I shall take time, however, to

think more of the theories of N. S. B. and his friend. They can't be examined fully in one day. I am bound in all candor to say that N. S. B.'s assertion that the production and exchanges of merchandise are the objects really sought by the use of money, which is only an auxiliary, is very forcible. If it be such, then I suppose its value must be the result of express or tacit convention, and I think I might say the latter, with reasonable certainty. If such is the case, then, as he says, all money must be a series of units, gold and silver as well as paper. I now think that must be so, but I want to think upon it for a long time, and therefore I ask N. S. B. to state as concisely as possible his friend's theory upon the subject.

N. S. B. His theory is, that when gold and silver were bartered, as they may possibly have been before they came into general use as money, they were bartered for each other or for other commodities, in the same way iron and copper would be now, in the absence of money, and indeed as they are now indirectly exchanged for each other by the aid of money as an auxiliary, if for the purpose of comprehending this indirect exchange, we mentally eliminate from the two equations necessary to effect it the conventional values in each, and reduce the two to one. The values of the iron and copper, or gold and silver, reckoned in each other respectively, then constitute the two sides of the equation. The units of valuation between the iron and the copper, or gold and silver, or either of these and other commodities, are the statement in an intelligible form of the relations between the iron and the copper, or either of these and other commodities, founded on intrinsic utility, real or supposed; the demand growing out of that utility and quantity on hand to be exchanged. But when gold and silver came into use as commodities of universal exchange, they could by no possibility be used in any other manner than by leaving out of consideration entirely, intrinsic utility, which is the only foundation for what is called their intrinsic value; and that being eliminated, we can think of them, and therefore use them only in the character of localized units, measuring the rela-

tions of value between those things we exchange for actual use.

C. B. C. How has it happened, then, that the production of silver having been sometimes at the rate of forty-five and perhaps never less than thirty pounds to one of gold, gold stood so long at the ratio of fifteen and one half to one of silver as material for making what you call, in the language of your science, metallic units of money, and now stands at no more than seventeen and three quarters or possibly eighteen to one?

N. S. B. The reason is, because the element of weight of masses produced, without reference to intrinsic qualities of either mass, being the only one upon which conventional value can be predicated in the very nature of the case, a much larger weight in proportion of silver than of gold has been manufactured for purposes other than money. Assuming the production of silver to have averaged forty-five pounds for every pound of gold, and the value of gold to silver as bullion to be as 15 to 1, then one hundred and five pounds of silver have been manufactured for those purposes, for every pound of gold. The exposure of silver to loss and destructive agencies has been, therefore, compared with gold, as one hundred and five to one. My friend has assumed the elements of production and ratios of bullion values. Of course they are only approximately correct. Silver, therefore, as compared with gold bullion, is worth about three times as much as products of mass compared to mass of the two kinds of bullion would indicate. Here is mathematical demonstration of the truth of my friend's proposition, that intrinsic value founded on intrinsic utility must be eliminated in point of science from gold and silver coin, as they are already from bank-notes, and all other forms of money. The indispensable condition which precedes the use of any kind of material (even wheat) for the manufacture of units of money, is the elimination of intrinsic value, founded on intrinsic utility and limitation of supply. The ratio of production being assumed as 45 to 1, the ratio of demand founded on intrinsic utility, which goes by the name of in-

trinsic value is as 15 to 1. If it could be carried, or rather if it would carry itself, through the forces in operation, up to 3 to 1, it would do away with the well-founded objections to silver in point of weight. This, however, is impossible. The ratio has been remarkably stable, and may be considered as the most stable barter ratio between any two known commodities, accidents of demonetization eliminated. Silver thus stands, by the consumer's estimate to gold, in the value or barter ratio of 15 to 1, assuming the elements of computation which are only approximately to be exactly true, instead of the ratio of 45 to 1, as indicated by product. But although silver is produced in the proportion of 45 to 1 as compared with gold, instead of one pound of silver being worth only one forty-fifth part of a pound of gold, it is actually worth one fifteenth, or three times as much as the ratio of production would indicate. Noting the necessarily rigid terms of the conventional barter rate, aside from the use of either metal for purposes other than money, and assuming each metal, if all of it were coined, to lose in mass, in ratios harmonizing with product, one pound of gold ought to be worth forty-five pounds of silver. This would make silver wholly unfit for money. Its actual use as money, except for subsidiary purposes, arises from its high utility as a commodity. The great importance of silver, then, for purposes of manufacture, aided perhaps by diminished production, will probably compensate in the end for the accidents of demonetization.

C. B. C. Why do not the great variations in annual product change what you call the barter rates between gold and silver, as they do between copper, lead, platinum, and other metals?

N. S. B. Because the principal controls the minor utility, and for the further reason that the principal utility is cumulative.

C. B. C. Explain yourself.

N. S. B. The first utility of gold and silver is conventional. Some material must have been adopted as money, and gold and silver were so adopted by an instinct of fitness

perhaps like that which makes bees place their comb in layers of curvature best adapted to its support. You can idealize upon this subject as much as you like. That is a matter of speculation. I am now talking about facts; perhaps you might call them mathematical truths. The use being conventional, it absorbs every pound offered: there can be no limit to the use, because there is none to the convention. But the element of intrinsic utility consumes two thirds of the silver and only one third of the gold product, leaving fifteen pounds of silver to every pound of gold remaining for use as money. The convention, by the tacit terms of which intrinsic utility is eliminated from the barter ratio of the two metals, leaving respective weights as the only one upon which conventional, in other words mathematical, value (for all conventional value must be founded upon mathematical proportion), can be founded, sustains itself throughout. It takes whatever manufacturing industry leaves, in the proportion of weight to weight, remaining in the bullion market, as it would have done if not a single pound had been used for purposes other than money, subject to the proviso that the weight of the mass thus thrown upon the convention would not have made it necessary to give up silver, as it undoubtedly must have done. This is one of the reasons for the general remonetization of silver.

C. B. C. This demonstration, if we accept it, annihilates all distinction between different kinds of money. It makes all money a series of units, the difference being one of relative fitness, greater or less.

N. S. B. Not only so, but it shows why gold and silver are the safest and steadiest in respect to harmony of production, and therefore as a measure of relative values between commodities, when they are distributed with them through commerce.

C. B. C. You say that Adam Smith adopted this view in respect to the distribution of bank-notes.

N. S. B. I say that Adam Smith demonstrated the folly of some of the legitimate conclusions from the theory of mercantile value in money as money, while he and all other

British as well as French and American writers maintain the theory itself, and call gold and silver, as money, a measure of value, measured themselves, as the British writers alone affirm, by the labor they cost, or the labor it would now cost to reproduce them.

American writers reject labor as a measure of value, as did that great writer, M. J. B. Say. The masterly sagacity of Smith, notwithstanding his theory, enabled him to perceive that bank-notes ought not in volume to be in excess of the metal they displace, but on the contrary to fall considerably short of it. He never talked about any essential difference between the work accomplished by bank-notes and that accomplished by gold and silver. He had the evidence of his own eyes that there is none; and the banking in his time, so much less complex than ours, did not disguise the process and make him think the banks were dealing in anything but money.

C. B. C. State in plain terms, that I can understand, the difference between the two kinds of banking. If you are right, the subject is one of international as well as national importance. O. P. E. and his friends and all bankers are firm in their opinion that a bank deals in credits; that these credits are something very different from money, — in short, the same as mercantile credits. Now we all know that mercantile credits, strictly speaking, have nothing to do with production: they arise only from sales between merchants, and hence have no relation to overproduction, as they certainly have none to inharmonious or redundant production. It seems to me that here lies the test which must decide whether your theory or theirs is the true one.

If bank expansion gives rise to overproduction, it cannot be mercantile credit; it must be money, for I know (and S. L. himself and all his fellow-laborers know) that it takes labor to produce anything; labor must be paid with money and not with credit, for that would imply that it had to wait for the sale of the product, as S. L. himself said the other day (I see he laughs at the idea of being paid in credit) when we were talking about paying workmen by checks.

N. S. B. The only distinction which can be made in reason between the two kinds of banking, if it be true that money is not an end in itself, but only means to an end, — if man invented money instead of money inventing him, — is in the effects produced, the quantity of production, the number of sales, the rise of prices which frequently disguises a real fall, and the resulting "depression," as it is called. If a purchase is made at wholesale by means of a check transferring "bank credit," what possible difference can it make what we call it, if it has the same effect as a delivery of a like amount in bank-notes? The drawer's check is limited by his credit in bank, and his credit is limited imperfectly by banking reserve, because the total of bank credits may be indefinitely extended, still leaving abundance of money in the reserve, a matter of fact to which Mr. Price has done good service in calling the attention of scientists and the banking world. The theory of banking now is, that the banks have borrowed all the money of depositors and own their reserve: it has come pretty near maintaining that they own their own debt, which they owe depositors. The English mind has not risen above overtrading and speculation as the cause of industrial, commercial, and banking crises. Clearing has been in use so long, and the movements of gold so apparently trifling, that the inference is, that the outward current of gold through the checks of buyers, returned by banks as the agents of sellers, which through clearing is arrested in the bank by setting off one current against the other, is simply a set-off of debts, of credits, or of debts against credits, for they have never exactly defined the process: even O. P. E. could not do it the other day. The small difference which, when loans are in the ascending scale, marks the daily increment of outstanding circulation by slow depletion of the reserve, corresponding with a like increment of bank debt, is supposed to supply the small change of the retail markets, while the daily increment of the reserve, when bank debt is contracting, is supposed to be the excess returned from the same market.

The British theory prevails in the United States. My

friend says, and I agree with him, that it is high time to decide the question whether the British theory, which he believes to have been very disastrous in its effects upon the productive energy of the United States, is true. He says, if the reserve has no connection with bank loans, as certainly must be the case if bank debt has none, gold is a source of useless expense; if there is perfect harmony of production, inconvertible bank-notes are good enough; if wholesale transactions take care of themselves without gold, retail can do the same by using what O. P. E. sometimes calls bank credit and sometimes bank debt, in the shape of bank-notes. If all the gold and silver and bank-notes in Paris were banked in deposit, and ten per cent. of the total were found sufficient to make all the payments, ninety per cent. being locked up, and checks and clearings used to the utmost extent, the bank books registering all the movements, he asks, who in his senses would pretend that the bank was dealing in credit or debt? But suppose, for the sake of argument, that American and English banks deal in their own debt. How can they do it without being at once converted into banks of issue? A credit following a loan then becomes a substitute for a like amount of bank debt in the shape of bank-notes issued and deposited. The credit, or more properly the debt, is then circulated by, while it at the same time limits checks. Upon the English and American theory maintained by O. P. E. and his friends, then, a bank of deposit and loan is at once converted into a bank of issue, and an intelligible although imperfect relation between reserve and debt at once established. To this alternative then are they driven: they must either admit that banks deal in their reserve only, or in their own debt as banks of issue, taking the notes and bills of their customers in exchange; the reserve, upon the former supposition, belonging to depositors; in the latter, to bankers. One of these two theories must be true; in fact, both are true: the first in an absolute, the second in a relative or subordinate sense. The first is absolutely true, because banks deal only in what was originally deposited, and the reserve is sufficient to make,

and actually makes, all payments; the second is relatively or subordinately true, because a bank of deposit-loan could at once be converted into a perfect bank of issue by the bank issuing its notes to depositors, closing its books as a deposit-loan bank, and opening new books as a bank of issue; retaining its reserve to redeem with, that being as essential after as before the metamorphosis. The ideas and terms of the schools, which have been imported into English common law, have helped to originate and maintain fallacies in respect to money and banking. Things *in esse* and *in posse*, vested rights, choses in action, intrinsic value in a commodity, and its entire absence from bank-notes, have served to perpetuate the fallacy of a supposed radical distinction between what is called bank credit and gold as commodity.

C. B. C. O. P. E. and his friends have, for the most part, asserted that in point of science there is no substantial difference between bank debt by note and bank debt by book. I must confess with you, that it is hard to find out exactly what they do mean. O. P. E. has just said that he cannot tell what his friends mean, and, therefore, I suppose, he hardly knows what he means himself. But it seems to me that you have here a clew to ascertain what they really mean. If bank-notes are like ordinary bank debt, in their opinion, is it not pretty clear that they are thinking about gold, double barter, and commodity, on the one hand, and all forms of credit and debt, including that of banks, on the other? This gives you two grand divisions: exchanges by commodity, which is double, and exchanges by credit, which is single barter. All you need to do, therefore, is to apply your analysis to bank-notes.

N. S. B. You are right. That is what most of them say; but in this, as in some other matters, there is an utter want of that logical precision which is essential. My friend, in writing his book, is not willing to make such an assumption, because some writers speak of what they call bank currency and set-offs and bank credit as being the same thing with mercantile credit. Then they proceed further

and confound bank credit with checks and bills of exchange, and say that all international trade is barter. This is the language of the scientists, and it is now the language of merchants. In the midst of such chaos it is impossible to perceive, much less to teach, monetary science without a careful analysis of both forms of banking. He will not take any man's admission. If he did so, in the midst of such uncertainty some other man might say that the admission contradicted his opinion, and could not bind him.

O. P. E. How could you convert a bank of discount and deposit into a bank of issue?

N. S. B. By paying off depositors in its own bank-notes, to be issued by the bank, and refusing deposits.

O. P. E. How would you convert it back again?

N. S. B. By receiving deposits. The reception or non-reception of deposits determines whether the bank *can*, in the character of a bank of deposit, discount a single dollar of commercial or any other paper. Hence all you have written and taught about a bank of deposit dealing in debts or credits aside from its reserve is contradicted by your own questions, for you nod assent to my answers. Two merchants, A. and B., have mutual dealings. A. sells and delivers merchandise to the amount of one thousand dollars to B., and charges him in account; and B. sells to A. to the amount of fifteen hundred dollars, and charges A. in account. The several entries, looked at from one point, are debits, and from another credits. Did the entries cause the merchandise to move, or did the movements of merchandise cause the entries? Do the cars on the Boston and New York route, by way of Springfield, move the locomotives, or the latter the former? If a deposit bank were established in France to-morrow, the government taking the management of it, not a single franc being loaned, the movements of the money being effected by checks, and handling saved to a great extent by clearing, ten per cent. of the deposit being in time found sufficient to make all the payments, and ninety per cent. being therefore locked up by order of government, to keep it more safely; would the debits and credits on the

books constitute the payments? Would the bank be a dealer in credits? Would the entries move the metal out of reserve, or, what is exactly the same thing, the right or power to use it, by leaving it in the reserve, or by taking it out, as might be more convenient; or, on the other hand, would *payments in metal* cause the entries to take place? Looking at the mercantile entries, they would demonstrate to an accountant the fact that merchandise had moved, and looking at the deposit-bank entries, they would demonstrate to him the movements in, out of, and back into the reserve. Precisely so with all deposit banks, whether they discount or not; if they have no "reserve" they cease to be banks of deposit, and are bankrupt. The moment they are said to deal in their own debt, and the assertion is admitted, that moment, if the premises are true, they are banks of issue. My friend affirms, therefore, that a deposit bank can no more deal in its own debt by discounting than a house can stand in the air without any foundation. To affirm that a house so stands is true only in the sense that it stands. To affirm that the cars on the Boston and New York route move the train, is true only in the sense that the whole train is moved. To affirm that the mercantile credits, in the cases supposed, move the goods, is true only in the sense that they prove that such movements have taken place. To make such an affirmation could only be deemed a figurative expression, and equally so if made in reference to the movements of the deposit reserve of the French bank of deposit: it could be true only as a conclusion from premises, false in point of fact, but, nevertheless, assumed to be true. The fallacy would lie in assuming the evidence of a movement to be the movement itself. That an American or English bank deals in its own debt is false. It is not true unless the register of a movement is the movement itself; but such an hypothesis is absurd and impossible.

Assuming it, however, to be true, a connection is at once established between bank debt and reserve, and Smith's law at once applies, — that safe banking demands the maintenance, within short periods, of a definite ratio between the debt and

the reserve. Reject the proposition that a bank deals in its own debt as absurd and impossible, the true object of this definite ratio is shown to be, to stop at a definite point, or at a point as nearly definite as possible, the use of the money of commerce in the reserve, without stopping one moment to make an absurd distinction between commerce at wholesale and commerce at retail. How absurd would it be to make any such distinction in the case of the French bank? It is equally absurd to make such a distinction in the case of American or English banks. The Bank of England, or rather a metallic circulation through the agency of that bank, was established in 1844, with the exception of a comparatively small and fixed amount, corresponding in volume with the debt due the bank from the government. The act made more than five sixths of the circulation metallic, and the intention was to make the notes of the bank circulate as gold would if there were no notes. This result has been accomplished, but the effect of economizing gold was not understood, because the commercial world has never got rid of the theory of mercantile value in metallic money. It never will, nor is it desirable that it should, in all respects, but only far enough and long enough to learn what economy in gold really means. The Bank of England may very properly be regarded as a great deposit and discount bank, keeping the reserve of the other banks, as they keep that of the commercial community. Every depositor in a bank puts as much money in circulation as if he had bank-notes or gold to the amount of his deposit. The circulation (not the volume of money) of Great Britain is probably much larger *per capita* than that of France, greatly as this may surprise C. B. C., but there is a vast difference in the distribution of it. In France it is distributed uniformly in proportion to capital; not so in Great Britain and still less in the United States. The circulation *per capita* in the United States is much larger than in France.

C. B. C. That surprises me, but I will not now dispute it. Your object, I now perceive, is to restore the true by improving the present imperfect relation between reserve and

bank debt, and to make it practically what Adam Smith, more than a century ago, demonstrated it to be, or rather what he demonstrated it ought to be.

N. S. B. That is one of the principal objects my friend has in writing his book.

C. B. C. I begin to see that what he aims to do is to carry out to its logical results what we all, I believe, admit, — the conventional character of all forms of money. I suppose you and he would say, therefore, that it may be called a process, or plan, for effecting the exchanges of commerce.

N. S. B. You have hit upon the very words I would employ myself. Bees secure their honey in layers of comb, having a curvature best adapted to sustain the weight. Mankind, wiser in action than in opinion, have hit upon forms of money best adapted to effect the exchanges of commodities in commerce. Nothing can equal gold and silver for safety and stability as money (without speaking of utility in other respects) when distributed naturally by commerce. The mischiefs growing out of the use of money have grown out of a seeming contradiction between what is absolutely and what is only apparently true.

C. B. C. Explain that assertion.

N. S. B. Bank-notes have taken the place of the precious metals very naturally. They certainly would never have been used so extensively without good reasons, and I am sure the true reasons are very different from those actually given. The conflict I speak of lies in part between the true reasons and the false ones. If bank-notes are without value, as O. P. E. and his friends assert, we and our ancestors have been acting for generations under a delusion. That is not probable; we are really wiser in action than our words import. It is certain that bank-notes have value; otherwise we should never have thought of using them.

O. P. E. The value lies entirely in convertibility into metal. Inconvertible notes are in true science worthless. It is a delusion to suppose that value lies in anything else but convertibility. Convertibility accomplished, the notes

have reached the end of their journey: that end is gold, because gold is an end in itself.

N. S. B. So thought King Midas, until he was driven from his delusion by starvation.

O. P. E. I think I shall have to qualify my assertion a little. I use the language employed by most economists in substance, but I think I am rather too concise in my scientific language. You are hardly able to understand me without some further qualification. But how shall I qualify the language of science? It is certainly not easy to do it, but I think the convertible paper may be said to have some kind of value in the right to sue the issuing bank, and taking —

N. S. B. Excuse me; but you was about to add, taking the chances of collection, I suppose?

O. P. E. You are right. There is where the value lies, if any there be.

N. S. B. You cannot sue, however, at all upon inconvertible paper, and hence it is worthless?

O. P. E. You cannot; but if you could, you would only get the same thing again, and possibly it might be worth less than the paper you brought suit on.

N. S. B. You reason well, and you are more consistent than many economists, Mr. O. P. E., for you do not hesitate in carrying some of your theories to their legitimate conclusion. You make redemption in gold the end in itself, as I understand.

O. P. E. That is what I have repeatedly said.

N. S. B. But after you have arrived at this end, what supports it? The Indian who supposed the earth to be supported by a huge tortoise was unable to tell what supported the tortoise, and you are equally unable to tell what supports gold. If gold is the only object of convertibility, the commercial world has been, for some generations past, striving to collect some thousands of millions at the end of law-suits brought against banks, without success. You are deceived, both as to metallic money and paper money, by a fallacy of words. If paper is worth nothing but a law-suit, mankind have not yet found it out. If gold and silver coin

are useful for any purpose but to buy and procure things other than themselves, mankind have not yet discovered it. They have certainly had a different idea, however, about gold and silver, to all appearance, do you say?

O. P. E. That is what I was about to say.

N. S. B. You are right in supposing that yours is the true reason for this idea, or rather one of the avowed reasons. Men act sometimes more wisely than they talk. They call gold a commodity, in the shape of coin as well as of plate. They give this reason for keeping it, or rather you give it for them. The true reason is, that all experience shows it to be the safest money to keep. Hence if you have an excess of paper, it will retire your gold into hoards, even in the United States, except so far as it is absolutely necessary to use it. All people act upon this idea; they use gold coin as money only when they are compelled to do so; they instinctively retire it in preference to paper, whether they assume it to be a commodity or not.

C. B. C. What do they think about bank-notes? They think one way and act another, if we take O. P. E.'s thoughts as a test. They say a bank-note is good as long as the bank that issued it is good for the note; but in what sense they believe the bank to be good, they, perhaps, have not a clear idea. O. P. E. has stated it, and stated it correctly.

O. P. E. In what sense did you understand me, Mr. N. S. B.?

N. S. B. In the sense that the bank is liable to suit, or, in other words, that it owes a debt, payable in gold, and may by law be compelled, while able, to pay it.

O. P. E. That is correct.

N. S. B. Here are the two grand fallacies, which, beneficent in their effects hitherto in France, have inflicted incalculable evils upon the United States and Great Britain. Germany has also suffered from them. O. P. E. and the banking world say that credit pays debts: they say, again, that debt pays debts. My credit is your debit, and your credit is my debit. What does all this mean? My debit to you means, simply, that I owe you a sum of money which

may be collected by law so long as I am solvent. Can the fact, the existence of that liability, be said to pay anything any more than forbearance to sue, hope that it will not be necessary, and charity to believe that it will not?

S. L. What is it, then, that pays? I know that a bank-note pays as well as a piece of gold. The only question we ask is, Will it pass?

N. S. B. You are right. What passes is exactly that which pays: what pays is the number of units marked on the face of the note, evidenced by the note itself, having a purchasing power or exchangeable value guarantied by the limitation of their number in consequence of this very liability of the bank and its solvency. The ability and the liability are not the end, nor the exchangeable value itself, but the foundation of it, and the means of supporting it. The tacit convention upon which the use of the notes is founded ceases with the foundation itself.

O. P. E. In specie-paying times the notes of the free banks of Illinois, which were really not convertible, were current for a time; and bank-notes, after banks have suspended generally, as well as the present national bank-notes, are used freely. Why is this?

N. S. B. Looking steadfastly at the real and not the imaginary end, and still insisting that the machinery has no other end than the one it actually accomplishes, the principle underlying such money is that which underlies all money. Inconvertible bank-notes, as they are called, are in reality redeemed by exchange upon commercial centres. This is the real and true redemption for commercial purposes: redemption in coin serves in part as means to this end, but not necessarily; because, after suspension, redemptions continue as before, and what is called bank contraction then goes on without restraint. The object of metallic redemptions, in point of true science, is to carry out the law announced by Adam Smith: to keep the volume of notes down to that of the gold whose place they take, and this rule applies to all money circulated through bank loans. Every loan, as I have demonstrated with a certainty which may be called

mathematical, puts an amount of money in circulation, as the result, which, in the absence of the loan, would not then and there be put in circulation. It is a general buying power proportioned to the number of units loaned. This is expansion of circulation, and contraction of that circulation cannot take place until the debt is paid.

C. B. C. You make all money, then, a series of units, — limitation being, in point of science, the end to be gained by redemptions in coin, — limitation against undue expansion or increase of the number paid out, as compared with the units of goods bought, as well as undue contraction.

N. S. B. You have not stated the object scientifically, because you cannot yet quite divest yourself of your theory of money as a power in itself, rather than the means only by which power is exerted. Money, being a conventional arrangement, is controlled by lenders and borrowers. When production has proceeded as far as it can without a crisis, loans of money are the means by which lenders and borrowers have brought it to that stage: prices rise as the production progresses, and in consequence of it. When production falls off, because it has arrived at that stage where it can progress no farther, the circulation of money, through wages and profits, falls off with it, and prices fall in consequence, whatever may be the actual number of units of money in the country, or *per capita*. The fall is the necessary result of the rise, and does not come independently of the previous rise. Units of metallic money are limited by the containing metal, and units of paper money are limited in number by the units of metal in the reserve of the issuing bank, both as to their total number and the amount of circulation which can take place by their means. The only perfect limitation is metallic. If two barbarians make an exchange of six horses on one side for twelve cows on the other, the units of valuation for each horse are two, and for each cow, one. It is a question of proportion, to be settled as the condition precedent to an exchange, and the proportion is naturally and necessarily in abstract units: there is no other mode of stating the terms of the proportion. It is thus stated, and

the exchange is made in harmony with it. This is an exchange by the aid of money in its first and rudimentary stage. Each horse is one unit of money to two cows, and two cows are a unit of money to one horse. Now suppose a species of shell, of a beautiful pattern, to be discovered, scarce enough to make it answer the purposes of money, and to be brought into use, and marked by those who first put it in circulation to signify their agreement to receive it as current whenever they have anything to exchange. Had these been used in the former case, the owner of the horses might sell them to-day for twelve shells, and to-morrow he might buy with them the twelve cows. The principle of proportion and of computing proportion is the same in each case. In the first case the units of valuation were limited by commodities then and there brought together and exchanged; in the second case, the units were limited by commodities to which conventional value was given by tacit agreement. Their value consisted in the limitation of their number, and their currency, and the great convenience resulting from their use. Now the introduction of gold and silver cannot change the principle of the second method of exchange. Utility, outside of money, does not in the slightest degree affect the principle of the exchange; neither does the introduction of bank-notes. The whole science of the subject has been buried up in a chaos of words and terms, which only serve, as long as they are in the way, to render the establishment of a true science of money impossible. My friend says that the greatest difficulty to be encountered, at first, is to be understood at all. If scientists would be logical and determine fully what reply they ought to make in their own minds to this question, — Is money a conventional system for the purpose of making all the exchanges needed by civilized men; or has it value, in itself, as money, independently of any convention, either express or understood? before writing a word, and carry out the answer, whatever it might be, to its proper conclusions, a true science could be established. The absurd conclusions to which one answer would carry them, and the sound conclusions,

because supported by all the facts, to which the other would carry them, would establish a true science at once. The advantage of using gold and silver lies in the fact that its units are limited with mathematical accuracy by weight all over the world, and, wherever they may be found, belong to sellers who have received them in exchange for commodities actually sold and delivered to buyers who are consumers, and the sellers are therefore now entitled to become consumers themselves. The gold in banking reserve belongs to such sellers, but being concentrated in a reserve which is constantly being replenished as fast as it is exhausted, when production and consumption are exactly balanced, and being, even when production is constantly gaining upon consumption, so slowly exhausted by reason of the slight difference between the two streams that a crisis changes the currents long before the reserve can be exhausted, the problem is: to make the two currents exactly alike, after loans have progressed to a point where they bear a certain proportion to reserve, in all banks. Purchasing power is number of commodities as it changes, while units of money remain the same; and price is number of units of money as it changes, while units of goods remain the same. Treating money, which is but a series of valuing units in a ratio, and which, after they have performed their function of valuing, perform the still further function of constituting one side of the equation of exchange, as a real commodity having value for any other purpose than that of being substituted for one of the commodities in the abstract, is the chief source of all the difficulties about money.

C. B. C. It seems to me that the present state of the bullion market sustains your doctrine, that gold and silver have a valuing power precisely like the units of valuing power in bank debt. We have always supposed — O. P. E. and his friends, and I, and my friends — that debt is used to pay, but your criticism upon that word and upon its correlative, credit, was just, in my opinion. If gold coin is equally and in the same sense commodity, whether paid out as money or sold as bullion, why have not prices risen

in England seven and one half per cent. above their former level? Why has not gold risen and silver fallen equally, in France? The rates between the two kinds of bullion have changed fifteen per cent.; silver has fallen below gold bullion, all over the world, fifteen per cent., reckoned in gold, and gold has risen fifteen per cent. above silver, reckoned in silver, or, in other words, each has changed its relations of value, as reckoned in the other by weight, fifteen per cent., which means that gold has risen above and silver fallen below the former par, seven and one half per cent. Suppose all the world were to refuse free coinage in the future for both gold and silver, using them for subsidiary coinage only, and granting free coinage to platinum. Would the unit purchasing power of gold and silver fall to the slightest extent? Would it not rather tend to rise, while the value of each bullion, except platinum, reckoned in money, would fall more than one half? Is not, then, equality of general exchangeable value between two pieces of bullion of equal weight, — one coined and the other uncoined, — merely a coincidence, as N. S. B. says? Have not O. P. E. and I been trying to make a distinction, when, in point of science, there is no difference? Is there, viewed in the light of common sense, — uncommon, if you choose to put it so, — as much distinction between units of bank-notes and units of gold in their effects, so far as they are used, as between the Entity and Quiddity of the schoolmen? I must confess that new light has fallen upon my eyes. How can debt or credit circulate any more than faith, hope, or charity, as N. S. B. asks?

N. S. B. When the discussion began, I thought C. B. C. altogether unreasonable, and so fixed in opinion that he could not be moved. I now see where the difference lies between him and O. P. E. Both assert the same doctrine as the foundation of their reasoning; both say there can be no overproduction. O. P. E. says there can be no excess of bank credits, and C. B. C. that there can be no excess of money, whether paper or metal. O. P. E. has some practical sagacity, which makes him hesitate in carrying out his

doctrine, and he is therefore very hard to convince; but C. B. C. now perceives that the doctrine, carried to its conclusions, leaves him where the old myth says it left King Midas. There is truth as well as poetry in the story, which is in itself a demonstration by *reductio ad absurdum*.

O. S. B. I have been listening for a long time, and as our interview is about to close, I will remark that there seem to be five demonstrations to which the attention of economists ought to be turned in the United States at this time, in view of the unexampled depression, and the failure of the science, as now taught, to explain it, for all its explanations only turn the popular explanation, which is only confused, into chaos. I understand N. S. B. and his friend to give us the following demonstrations: —

DEMONSTRATION NO. 1.

The development of money shows it to be a series of valuing units, whose value, like that of all units in a ratio, is one of proportion by numbers, which, if placed in the numerator and remaining stationary in point of number, increases directly in value with the units of goods in the denominator, and gives purchasing power or value of money in exchange, as reckoned in units of goods, the quotient being a unit or units of goods; and if placed in the denominator and made to vary, while the units of goods in the numerator remain unchanged, gives price; the quotient being a unit or units of money. They say that units of goods must necessarily vary somewhat, but the variation ought to be confined to them as nearly as possible, while keeping the units of money steady in point of number, by the most effective method of limitation, and for this purpose it is essential that the units do not increase faster than the units of goods throughout the commercial world, and that to this end they ought to be distributed everywhere in proportion to the distribution of units of goods; that is to say, commerce. They say that to distribute them in proportion to the production, instead of the distribution of units of goods, must necessarily lead to confusion and blocking of the exchanges of goods, and con-

stant variation in the units of money distributed, as compared with the units of goods distributed, because all units of money paid out to production in one quarter, in excess of production in another, cannot be kept out of market, as the units of goods can be for a time, so far as the exchanges are not ready for them, because the excess of units of money thus created at the same time with that of goods follows the goods which are actually distributed, and, by raising prices, deceives those who are producing the excess; and the merchants who buy are left with a part of it on their hands, and are thus unconsciously made to play the part of speculators.

DEMONSTRATION NO. 2.

After development in a rudimentary state, money has further developed in two forms: in units of metallic commodity limited by the metal, and in units of bank-notes limited by convertibility into metal, or, if non-convertible, by designated limits, and redemption by exchanges and drafts on commercial centres. They say that gold and silver units are the most perfect forms of money conceivable, and have been growing more and more perfect as their total number has increased, — the ratio of increment thus becoming less, continually, of late years, because commerce has increased more rapidly.

But they say the increase of banks has more than compensated for this loss on the part of the units of metal as compared with units of merchandise, by "economy" of metal. This latter element (economy) they say is of itself exceedingly variable, and threatens with the extension of banks to annihilate the unvarying character of the metallic unit, the demonstration that all units of money are *essentially* the same necessarily leading to the corollary that in order to preserve the almost perfect valuing function which metallic units are generally admitted to possess, all the conditions which enable them to maintain it must at some point or other be recalled. This general corollary may be resolved into the special one, that as bank loans to a merchant, to

purchase say one hundred thousand dollars' worth of merchandise produced and still held in first hands by means of bank loans, retain the one hundred thousand dollars for use in the producing market until the merchandise finds consumers; to stop loans universally in all banks after a certain portion of deposits have been loaned, is really to stop producing by the aid of bank loans then and there, until by bringing the units of gold moving in, out of, and into the reserve, in harmony with the distribution and consumption rather than the production of goods, both production and prices are brought to average by carrying back to the banks the redundant units of circulating gold or notes (it matters not which), or by retiring through checks the power of circulating money in the reserve. In the absence of clearing the latter is a payment of money out of the reserve to the buyer, who pays it to the seller, who returns it by depositing to the reserve: clearing by the aid of banks saves the handling of the money.

DEMONSTRATION NO. 3.

In the third place, it being shown by the second demonstration that all units of money paid out for purposes of production are carried at pleasure into the distributing as well as the producing market, and remain there until the product is sold, the next question is one of fact: Does overproduction occur, and, by occurring, bring on commercial, industrial, and banking crises? The absolute necessaries which producers have to offer in exchange, after satisfying their own wants, may be assumed as at least equal to those which are relative. The producers of the absolute sell all their surplus annually; the producers of the relative carry over large stocks. The latter are carried over for want of buyers; but there would be buyers if there were producers. Again, overstock naturally falls in price, as compared with goods which are not overstock. It has been shown in Demonstration No. 2 how this effect may be postponed for a time. When a crisis comes the law referred to asserts itself, as it would if there were no such thing as localized units of money to

disguise it. We have practical proof of this assertion in the fact that wheat has not fallen since 1873, but iron has fallen more than one half, and cloth, furniture, carriages, city and village buildings more than one third, by the falling off of wages and profits. Still again: had one third of the laborers been engaged in producing absolute necessaries, thus adding to the product of the latter, while at the same time taking equally from the former, there could not have been an industrial crisis. If there had been no industrial crisis, it would have been because no laborers were turned away. If no laborers had been turned away it would have been because there was no overstock of the product. If there had been no overstock of the product it would have been because the current of units through payments would have been equal to the current through loans: the latter would have resulted from the former. This equality of currents in number of units is precisely what N. S. B. has called an even ratio of reserve to debt. This is what Adam Smith called sound banking and the result of sound investments. A crisis, therefore, has an industrial, a commercial, and a banking side: the producers, the banks, and the laborers have acted together, and may be economically considered as partners with separate but closely allied interests in the results.

O. P. E. We call the crisis speculative, because we do not believe in such a thing as overproduction. It is speculative purchases, not of what is relatively overproduced, but kept out of market on speculation, whether merchandise, stocks, or real estate. It is the fall or the recoil of prices which constitutes the crisis; unwillingness to sell at the reduced prices, and sometimes shrinkage sufficient to annihilate margins.

O. S. B. I thought so when I had taken my last lesson in political economy, and I thought I was confirmed in that opinion after reading your work, but this discussion has convinced me of my error. I am certain we have been the victims of fallacies founded on supposed facts and distinctions which have no existence save in our opinions. What is speculation? Is it not buying in hopes of a rise exclusive of ordinary fair profits of trade?

O. P. E. That is what we have always considered it to be.

O. S. B. Be it so; but how can you have a general buying of all the relative necessaries of life sufficient to produce such a crisis as we have now, unless there is relative overproduction throughout that quarter? It is impossible, and it is equally impossible to maintain it long without an apparent rise by creating an expansion of prices through the units of money which pay for the labor and material invested in the product. This general buying on credit, as we have usually called it (we have sometimes called it speculation), I now perceive to be merely a purchase of the overstock by a payment of money borrowed from banks, which makes no set-off of bank credits or debts, because while it retires out of circulation the money borrowed to buy the raw material and the wages for working it up, it puts in circulation in its place, not only the same amount of money which the raw material and work cost, but large sums for profits beside. The resulting rise of prices comes, not by mercantile purchases on credit, but by the increased volume of units of money put in circulation. But the overstock increases very gradually: moreover, it is not all overstock, for we sell largely to consumers, and if one is a speculator, such are all. I speak now on behalf of the mercantile community to which bankers may in a certain sense be considered as belonging, and I ask whether we have not been entirely misled by such words as speculation, commodity, barter, and credits? If the community of merchants, including bankers and producers, have accumulated an overstock of one thousand millions, and declared profits on sales of the overstock to the amount of two hundred millions (repeating the process several times), credited them up in the shape of dividends and mercantile gains, and invested the same in the building of houses and warehouses, the erection of mills, and the building of railroads, because they supposed the dividends and gains to be fairly earned, does the word speculation convey a correct idea of the process? Is it not rather a word which entirely conceals it? Surely it is; and the real process is relative overproduction. Of course universal overproduction

is impossible, for that would mean universal plenty in excess of labor expended. I perceive now that what we want to accomplish is not less but on the whole more production, by producing in harmony, so as to have harmony of exchange, as in France. We must have a new political economy founded on facts. We do not desire to force banks to loan less, but on the whole more; we do not wish to curtail their profits or those of the producing and mercantile community at large: we aim rather to increase them. This is the third demonstration in order, which I furnish out of this discussion, and now comes

DEMONSTRATION NO. 4.

The fourth demonstration involves the question of banks. Are banks indispensable to the laborers, the merchants, the producers, — in short, to all the people of the United States? As the result of this discussion, I affirm that they are. In a country like France, where, in the absence of banks, commerce has distributed so large an amount of metal, all the money required can be had in metal if desired: the supply is ample. By the use of banks, Great Britain and her colonies, and the United States, have economized metal to a very large amount. To abandon that economy by abandoning banks would more than double the metal required by these countries, and produce what C. B. C. would call an enormous contraction. It would have a depressing influence upon production, — in short, it would be impossible to carry out such a policy suddenly. It would require a long time. The present uneven distribution of metallic material must, therefore, be allowed to continue. But in order to maintain Smith's law of proportion between any form of debt used as money and metal, banks are indispensable. No matter what institution makes the loans and thus creates the debt by means of which the economy is effected, that institution is what is now called a bank. If government issues paper for such a purpose, it must do it as a bank. It can issue a small amount to take the place of as much metallic currency, but it can only be small, like the paper issued to the Bank of England on

government debt. Banks and bank loans have created the "economy," and by them alone can harmony of proportion between economy and the metal economized be maintained. This must be maintained, as Smith has pointed out, by equalizing the current which commerce draws from banks with the current it returns to them. This equalization will check the slight daily increment of the outgoing current slowly proceeding up to a crisis, which indicates the advance of production beyond the possibility of realizing through the exchanges. It matters not whether a bank be one of issue and deposit loan, or deposit loan only: an *economy of money is effected by increasing the circulation of money*, and all extra circulation of money over and above immediate consumers' exchanges comes through loans. After the invention of units of shells marked by the issuers, the difference between barter and money exchange was in the fact that the respective owners could dispose of their commodities one day and on some other day buy, not any particular commodity, but whatever they might desire, if it could be found, thus dividing the real exchange into two parts, and adding the convenience of allowing the seller to locate his exchange upon any commodity. Should one person discover a secret place where he could obtain an unusual number of shells, this would create a redundancy and local rise of prices, because the units of money would be in excess of commodities. If one half the members of the community deposited with one man, he could loan some of the shells beside supplying all the calls of depositors. The borrowers could only pay him by means of increased production: they could not by any possibility pay without it, except by way of anticipating ordinary income through the old rate of production. This would create a redundancy of production in that quarter where the loans were used, which might create a crisis if allowed to proceed without limit. The same principle underlies the use of all money, even gold and silver.

DEMONSTRATION NO. 5.

The fifth demonstration may be considered rather as a corollary from the foregoing. In view of the unit character of all money, the present plan of coining silver in the United States appears absurd. No possible advantage can accrue to laborers and producers by attempting it, and a partial remonetization cannot drive out gold, while general remonetization cannot be brought about until convertibility has been established. S. L. and C. B. C. will pay the same taxes, whether silver be remonetized or not. The only important question in relation to it is that of the ratio to be agreed upon for general recoinage hereafter. That the unit theory of money is not probably but certainly true is proved by the mathematical accuracy with which gold and silver bullion are valued in each other. If the ratio of gold to silver is 1 to 18 in the bullion market, then, taking masses of each bullion of equal weight, gold must be multiplied and silver divided by 18 to find the value of the units stated in each other. The relation of the masses is mathematical because it is exact; it is one of weight of mass only. The value is therefore mathematical and abstract. But if gold values silver, and silver gold, mathematically and abstractly, — each rising in value as it loses in weight, and falling in value as it gains in weight, with mathematical accuracy, how can the value of gold reckoned in silver, or that of silver reckoned in gold, be stated in any other than abstract units; and, in point of fact, is it not so stated? If silver and gold are both "commodities" bartered for each other, and their relation is abstract, the relation of each of them to all other commodities must necessarily be of the same character. In other words it is *perfectly*, and not *imperfectly*, conventional. That money values as an abstract unit and hence that all money in equations of exchange between buyers and sellers is in substance the same, is mathematically certain; the real difficulty my friend and I have to encounter is to make people perceive the force of the demonstration practically as well as abstractly, on account of the prevailing ideas em-

bedded, as it were, in language itself. Banks, as Adam Smith testified, stimulate production: the time has arrived when a proper limitation must be kept upon that stimulus, not to destroy it, but to perfect it, and prevent it from being any longer the source of so much injury to the whole community, bankers included. That the true theory of money will be learned by and by seems probable, because the thinking world is at work upon all social questions, and must discover that the relative barter rates between gold and silver, having changed fifteen per cent., have neither taken from the purchasing power of silver nor added to that of gold, and possibly never may. Silver, as the raw material to make metallic units of money, has fallen, and gold as raw material has risen; but the units themselves have neither fallen nor risen, because they can only fall or rise with the ratio of coinage to the total number of units already coined, — a ratio slight compared with the fall in the raw material of silver bullion, — while the fall itself will in time be balanced by increase in the units of merchandise in commerce, decrease in silver product, and slow redistribution of the loss in purchasing power of the silver unit among all buyers and sellers. The present state of the bullion market also demonstrates N. S. B.'s theory of overproduction. Why cannot surplus silver be shipped to China (admitting it could be coined fast enough) and invested in merchandise? Because there is a limit to Chinese production, and the silver would soon be redundant locally before it could be distributed, and prices would rise, not to the same extent, but for the same reason that they rose in Germany, and in Ancient Rome, where the price of a rare fish equaled that of an ox, and a fortune was lavished upon a single supper. Again, if trade dollars could be shipped in any number without raising prices locally in China, the increased importations would not be in harmony with the production of the United States, and prices of imported Chinese merchandise would fall. The market for silver has fallen off through production having been made redundant by demonetization. Inharmonious production of any kind leads to a crisis. When the true theory of money is learned, and bank

loans brought in harmony with the distribution of metallic money, if it be possible to accomplish it, a serious question will arise, whether the units of merchandise in commerce are not increasing in excess of the units of coined metal: a general monetization of both metals will then be demanded by the wants of commerce if the ratio of the units of merchandise to those of money increase rapidly in excess of the ratio of units of money to units of merchandise in equations of exchange. But this change would unquestionably be so slow that the loss of purchasing power would be but nominal, because, being slowly, it would be evenly distributed. The change, however, *might* have a depressing effect upon production.

If the nature of money as a conventional system had been fully recognized (I will not say by bankers, but by those who have written about it), and had it been carried to its logical conclusions, it ought to have appeared that all money must necessarily be in substance the same. It cannot be a conventional system in any other way than as a series of units limited in some mode; and if bank loans expand up to the time of a banking crisis, and then, in spite of all the efforts of banks to the contrary, contract until the elements of another crisis begin to form, it is certain that money is not the cause, but the forces behind money. Are bank loans ever made to producers of wheat? If made, would they materially increase the crop? Would they not have an injurious, if any effect at all, upon the total produced, by diminishing instead of increasing it? Do loans to the producer of wheat on mortgage increase the total crop in the slightest? They surely have no material effect.

On the contrary, three fourths of all bank loans are employed in the production of relative necessaries; in the accessories, rather than the principal means of living. It is the increase of these accessories in accordance with the laws which limit the power of men to produce in general, and subject to the inexorable condition of working in harmony, that creates wealth.

The reason why a regulated reserve is essential is because

the reserve is the money of commerce : it is not a sum of gold purchased by bankers to pay their debts with, or supply the wants of retail as distinguished from wholesale trade. If the total of bank loans were never allowed to exceed four fifths of the total of deposits, gold and bank-notes would circulate together. This would, of itself, regulate the circulation and redemption of bank-notes. But this is a difficult, perhaps impossible, regulation. Could it be, and were it accomplished, however, it would make all bankers conservative, instead of involving the conservative in bankruptcy with those who are not so, because all banks are in true science to be regarded as one. In production and commerce the United States are one nation : they ought to be one in the monetary machinery which moves production and commerce. So long as banks issue notes, it is generally conceded by those who think at all upon such subjects that the unity of the bank-note, now purchased at considerable expense, ought to be continued, instead of wantonly abandoned. But the regulation of bank-notes really sinks into insignificance compared with that of deposit-loan banking. The latter may be partially regulated by retaining the national banks which now hold more than half the commercial deposits of the country. These banks may be required to keep their coin in definite ratio to notes at commercial centres, allowing the coin to count as part of the collateral security for redemption of notes. This would be the first step towards regulated reserve of any kind, and a saving to the banks. This accomplished, the important step is to make scientists themselves learn what deposit banking really is. This they can hardly do until they have fully learned what money is. To lose the unity of the bank-note at this time, and with it the possibility of assimilating our currency as nearly as may be in point of steadiness to that of France, where metal is but slightly economized, would be a great misfortune to the laborers, the bankers, the producers, and merchants of the United States. Properly regulated banks of any kind are a great stimulus to production, as Adam Smith — the most competent witness in

view of his own powers of observation and the recent introduction of bank-notes in the place of three fourths of the previous metallic currency of Scotland — testified. Money, being a conventional system, avails only when used ; the exchanges of consumers' markets, aside from loans, constitute its ordinary, those arising from loans its extraordinary use. The system which sustains the largest volume of loans — that which has the greatest number of units of debt due to lenders — is that which sustains the greatest volume of production. A railroad is largely a product of bank loans. The laborers who make the iron, the road-bed, and the rolling stock are paid by bank loans, and what bank loans fail to accomplish is accomplished by loans made by bank stockholders out of dividends from profits other than those arising from sales for cash, and out of like profits on the manufacture of iron, and on sales of other merchandise, by those who are not bank stockholders. If writers and bankers can never be made to learn that the question is one of loans only, and not of the banks and persons who make the loans, and the kind of money in which they are made, it would be well for the United States to fall back slowly upon a currency like that of France, inviting the commercial world to monetize silver and gold equally, and perhaps to monetize platinum at gradually increasing ratios of value to be determined by success in the increase of its production and distribution, or the contrary. Metal is abundant enough ; that is proved by the fact that the only objection to silver is that it is too abundant, because it cannot be used as metallic commodity, but only as a series of valuing and paying units, and that purchasing power depends entirely upon the number of units which can be made of its mass, in harmony with the mass of gold. If gold and silver were everywhere money, each would have half the total number of units. The question, therefore, is a mathematical one. The whole mass of silver must in this case be divided into the same number of units as the whole mass of gold, or copper, if there were no gold, and copper were used for want of it. Three fourths of the mass of silver would be annihilated at once by a vote of the com-

mercial world, and its whole value carried over to the remaining fourth, if it were possible to maintain it. To do this is mathematically impossible, because the whole question resolves itself into abstract units. It is impossible to change the quantity of metal going into arts and manufactures as commodity, and it is equally impossible to change that going into coin. To reduce the weight of silver coin would only add to the number of units; and the purchasing power of valuing units, as a whole, cannot be increased by adding to their number throughout the commercial world. Upon this principle units given and taken in exchange, limited by bank-notes convertible into metal, are in true science money as well as coin itself. It is not bank-notes, bank debt, or bank credit which is given in exchange for commodities, but units of money evidenced by bank debt and limited by liability and convertibility. When the true nature of money is understood, the supposed insufficiency of metallic supply will seem absurd while silver is rejected by reason of its bulk. It is not the insufficiency of metallic supply in the abstract, but relatively, which makes it impossible for the United States to adopt a metallic currency exclusively. If adopted at all, it must be gradually, because the mathematical necessity of using metallic commodity in the shape of units of money, and not as ordinary metallic commodity, forbids it. There is the same mathematical impossibility of making the exchanges of commerce with what are called debts and credits, or by set-offs. Even if bills of exchange and promissory notes were employed, they would be exchanged in their character of valuing and paying units. Any other exchange is impossible, because in all exchanges units of value in commodities on one side constitute the first member of the equation, of which the second is found in the units of conventional value in money on the other, while the purchase is completed by reversing the two sides of the equation and making the units change ownership. Ten units of wheat sold to-day in market, and measured by buyer and seller, are given in exchange for ten units of money already measured, in the case of bank-notes and coin: the units of the latter

have been measured before, and need only verification; the units of the former must be measured at every purchase, and are, until measured, uncertain in number. In all cases, however, the relation is one of units to units, and it is mathematically impossible for valuation to be made otherwise. These are the five leading demonstrations furnished by this debate on the side of N. S. B. It is time to adjourn unless some questions remain to be asked.

C. B. C. I would ask N. S. B. to explain why, when we have such large surplus crops, which we are sending abroad, while there is an overstock of relative necessaries, as he says, and while, as I know, laborers like S. L. are nearly starving for want of work, which nothing but money can pay for, he can insist that money is not scarce, while everything else is plenty. When everything is so abundant, why should there be so much suffering, unless for want of money to pay labor? The banks have heretofore furnished abundance. Why do they not now?

N. S. B. What you call, and what is generally known by the name of scarcity of money, if carefully examined, will lead you to a true knowledge of the causes of the present distress. A very large part of the production outside of agriculture is sustained by bank loans. Were there no banks it would be sustained entirely by loans from capitalists, who could loan only as fast as money already out on loan would return to their hands out of loan. In the United States and Great Britain the capitalists who, in the absence of banks, would make the loans, are now depositors in banks to a large extent. Notwithstanding this fact, they loan as much as they could do in the absence of banks, and not only so, but they loan in excess of that amount, because dividends are declared out of profits on sales of goods which have not only not yet found, but for a long time will not find, consumers. Add to all the loans which can be made in the absence of banks the loans which banks make, and to these the additional loans which individuals are enabled to make on account of wages and profits received on sales of products of labor outside of cash markets by the aid of money borrowed from banks, and

we have an addition to all loans which can be made in the absence of banks, a vast total. The extra loans which can be made and maintained with banks of issue in the absence of all deposit banking are trifling in volume compared with those which are made and maintained under deposit-loan banking, even if the only money in use be gold and silver. If Adam Smith's opinion, that banks of issue ought to keep the outgoing current of loans and the return current of payments nearly equal at short averages in order to have sound banking, is correct, it is still more essential to equalize the outgoing current of ordinary bank loans under deposit-loan banking with the return current of payments. The principle is the same in each case, but most important in its application to the latter kind of banking. Abundance of money means abundance of loans, and scarcity of money scarcity of loans; but banks do not make either money or loans scarce by any means, because they not only loan all they can to real producers who borrow to sell as well as produce, but they loan so much that the ability of their customers to borrow is cut off in many cases by bankruptcy.

When a crisis sets in, banks as well as borrowers are powerless in making money either scarce or abundant. Scarcity of money merely means that they cannot loan as they did when production and prices were in the ascendant. They are compelled, it is true, to stand guard, as it were, in respect to some loans. An overloaded producer may want to borrow to hold overstock and stave off bankruptcy. The real meaning of scarcity of money is that a crisis in production has rendered the producing and mercantile community powerless either to produce or hold more overstock. The real call for loans is mostly from those who have overstock and by renewing loans want to hold it as long as they can, in order to take their chances of avoiding bankruptcy. In this sense money is scarce. The correct meaning of the expression is, not that the mere units of money are scarce, but producers are unable to produce any more until they find a market, and hence there are few loans, and banking reserve increases. It would be more correct to say that the ability to use money

in further production, and hence to borrow money to pay labor, is scarce, and therefore labor, has comparatively little money to pay, and much less than it formerly had. It is "hard times" with labor, therefore, as well as capital, and the "hard times" extend to the whole community, most of the active members of which are either producers, laborers, or merchants.

One of the greatest sources of loss is to those who hold the overstock, and suffer from what is called shrinkage. Their overstock, together with the circulation of money, shrinks; their debts do not shrink. The railroad which cost thirty thousand dollars per mile, if it could have been built under steady prices, would have cost only two thirds of that amount. The cloth sold at auction at five cents per yard, which cost eight, would have been produced and sold at six. The municipal improvements would not have been made at the time they were made, and when, if ever made, would have cost only half the amount actually expended. What makes the crisis is the excess of debt incurred when prices were high. The high prices arose from overproduction, in which the whole country was engaged, except the producer of absolute necessaries. Neither banks, producers, laborers, or merchants are to be blamed. The only remedy, so far as there can be remedy, is a reserve like that spoken of by Adam Smith.

O. S. B. Does the word overproduction convey your meaning exactly, Mr. N. S. B.?

N. S. B. It does not. I suppose it can hardly yet be considered as belonging to the vocabulary of the science of production and exchange. It is a compound which, in all its implications, is directly opposed to the opinions of all the writers whose works are standard authorities to-day. I do not, by using the word, mean to imply that men can be too industrious, or devote themselves to business of any kind with too much energy. I affirm that the foundation of civilization is commerce: commerce, as a whole, is the exchange of the merchandise or commodities which millions of people are making with each other, and, in order to make them,

they must be continually producing. If, after the products of one year are disposed of by one half of the total number of producers, the remaining half have a surplus left, it is certain that there is a want of harmony in production. Harmony of exchange there necessarily must be, because a surplus of the kind mentioned cannot be exchanged; there is nobody who is able to take it and give something else in exchange for it. This surplus is sometimes called a glut of one or more commodities. It is so called by M. J. B. Say. The mistake on the part of M. Say and his followers is in limiting the glut to a few commodities: it extends to a very large portion of the grand total. The mischief is, not that people have been too industrious: they have paid for more labor, in the production of a large number of commodities, than they can sell in the shape of commodities. They have done this largely with borrowed money, at very high nominal prices for labor and material, and not only nominal, but in the end, real, for them, because debts do not shrink. Overproduction is always very costly. For a time the prices of the overproduced article, instead of apparently falling at the same time they are in reality falling, apparently rise for a time, while overproduction is going on, in consequence of the free expenditure of money paid labor during that period; and when overproduction has reached its limits, and labor has less money, and capital less profits, the real fall in value of the overproduced articles, hitherto concealed in rising prices, is made apparent. The total production has been large, and granaries may also have been bursting. If productive energy everywhere were not great, overproduction in so large a part of the field could not have been maintained. A rich nation must necessarily have great productive powers, but its producers must work in harmony. The United States and Great Britain are virtually one nation in respect to trade and the movement of the productive forces. Bank expansion and the expansion of production and credit move together in both countries, and to a great extent throughout the commercial world. The expansion and collapse in Germany, on a grand scale, arose from national and inter-

national causes of a peculiar kind, and the collapse there was not coincident with that of Great Britain and the United States. However abundant harvests may be, it is enough to create "hard times" to bankrupt a considerable part of the producing and mercantile, and discharge a portion of the industrial community. It is a great mistake to suppose, however, that in any true economic sense there is a surplus of labor. There is not too much labor. Labor is strong, but, like Polyphemus in the fable, blind. We are destroying forests to build temporary houses, fences, and barns. Our country roads are bad, our city and town roads and avenues magnificent. There is misdirected labor everywhere. Our town population is too large, and to maintain the proper balance of production we have not cultivated land enough to supply those who are producing the relative necessaries of life for us in the United States, in Great Britain, France, and elsewhere. Railroads have changed the face of the world, but we must not allow so many to be built through forests at the cost of bankruptcy for those who build. Population and local capital must meet the builders half way; and, to enforce this rule, we must regulate the great magazine of production on credit, — bank loans. There would certainly be no essential want of harmony of production were there no loans: it is equally certain from this discussion that all loans are made in money, and that by means of banks a very large volume of loans of money is maintained by the consolidation of the money reserves of a large part of the producing and commercial classes, together with those of capitalists, in banks. It is giving money an additional use or circulation — whichever you choose to call it — over and above the use which could by any possibility be made of it in the absence of such consolidation, besides the additional use these classes of persons give it themselves in consequence of deposit loans. I fear there will be no remedy until the nature of money is better understood. O. P. E thinks it is not money that banks loan, or, as his phrase is, deal in, and that the credit is only used in some manner — he cannot explain how — in the equations of payment. He

calls it a set-off. I have heard of a plea of set-off, and understand how two persons dealing together pay only balances in cash, but I am unable to understand how I can pay by set-off when I buy of a merchant with whom I never had any credit in my life, when I pay him by check. I can understand, also, how banks are mutually charged and credited by what is called clearing. This you may call set-off; but I cannot understand how there can be a set-off between buyers and sellers, when bank checks are used, any more than when gold is used. It is, in fact, utterly impossible; because if I have dealings with any one we make our own set-offs, whether we use checks, bank-notes, or coin. It is mathematically certain that the equations of exchange are alike. Is not the set-off, then, something which occurs only between banks in clearing, to save handling the money in the reserve?

O. P. E. That is all that was ever claimed for set-off, and, therefore, as I said before, there is no *essential* difference between payments by checks and payments by bank-notes. But, before adjourning, I would like to hear from N. S. B. a plainer and clearer statement of his theory of money. I am unable yet to understand how he eliminates intrinsic value from gold and silver.

N. S. B. I have at last something like order out of your chaos in respect to bank-notes and bank credits, and I will now give a brief answer to your question, which I think you will understand. I have not attempted to eliminate utility and limitation of supply and the real value which results from them, from the metal of gold and silver coin in metallic commodities, and shall not, while I have my senses. What I do say in respect to money of all kinds is, that it is as money *essentially* one and the same thing under all circumstances, because as money its value being entirely conventional, it values only in the character of abstract units: the difference in point of science is in the manner of localizing and limiting them. It is mathematically impossible for it to be otherwise, because *as money* it is a series of valuing units. If a valuing unit in a ratio or an equation of ex-

change can be a commodity having intrinsic utility, and therefore exchangeable value by reason of that utility, then gold coin in a ratio or an equation of exchange is a commodity. But such an affirmation is an absurdity in terms. A good bank-note is worth its face, as the expression is, aside from its use as money. Its being so gives it a value equal to that expressed on its face as a mere debt. But this value is totally distinct from its conventional value in exchange for what it buys. The latter is means to an end and not an end itself. As money it is worthless except to buy with, and its value in exchange for other things is constantly varying. The fact that it is good and convertible is means whereby the number of units of money put in circulation in that shape is limited, and each unit thereby maintained in its exchangeable value with the least variation possible. An excessive volume, as well as increased circulation or use of the units through deposit loans, may depreciate them twenty-five per cent. in purchasing power, while they remain as collectible as ever. Their limitation in volume and circulation is not always duly maintained, and as the numbers of money units in the daily ratios of value and equations of exchange increase, they lose exchangeable value. Precisely so with gold and silver. They value in their character of units precisely as do bank-notes or "bank credits," if it be true that the latter are used in the character of units of money. Hence the purchasing power of a unit of silver or gold called a dollar has an exchangeable value entirely distinct from the value of its bullion reckoned in units of silver or gold dollars. The value of the latter might sink one half, as it already has nearly one sixth, without affecting the value of the unit in exchange. That the bullion of the unit will sell for the unit itself is merely a coincidence, and not cause and effect. To make the coincidence always cause and effect, it would be necessary to fix by treaty the barter rates between gold and silver, and never to vary in the slightest from those rates in coining anywhere, to coin freely for all bullion holders, or to allow every merchant and banker to coin and verify his own metal. The bullion of the unit

would in that case always sell for the unit itself, and could be converted without loss into other units as long as it continued of full weight. Money is an invention to facilitate exchanges: it is impossible for you to understand it unless you keep this truth steadily before you. The difference between barter exchange and exchange by means of money lies in the fact (a very important one) that the units of valuation or comparison in barter, which precede the exchange of commodities, are by means of money actually converted into tangible things: shells, wampum, elk teeth, gold and silver pieces, and bank-notes with the units expressed on the face. Commodities cannot be compared and valued except by units: the comparison and the valuation must be made in that manner, because they can be made in no other. The same comparison and valuation are made between commodities, and all kinds of merchandise and capital with units of money as with units of barter: the difference is that with money the units are localized, and made the equivalent of the commodity which a buyer wants. All who want commodities to consume or to sell obtain them in the character of buyers. Everything is valued in units of dollars, pounds, etc., and all things exchanged by means of money are thus mutually valued in each other, as they would be under simple barter: the only difference is, that they are not now brought together as in barter. There being no essential difference in money, the function of gold in all banking reserve is essentially one of limitation, and thus we have mathematical demonstration of the correctness of the rule laid down by Adam Smith for banks of issue.

There is no essential difference between one kind of banking and another in this respect. In every ratio of valuation and every equation of exchange, there ought to be, upon the average, a definite proportion of units of metal, — they need not be actually handled. They can perform their valuing function without being taken out of reserve at all in by far the greatest number of cases; but whether they are or are not taken out, the principle of valuation and the value of the units in the equations of exchange between buyers and sell-

ers are the same in each case. There is a relation between reserve and bank loans and debt, whatever the banking may be, as long as it lasts, but it is altogether imperfect unless the ratio between them varies at short averages according to Adam Smith's law.

Were banking reserve so kept, the fallacy which the last generation of English bankers and writers taught and have fastened upon this generation — that a bank which is not a bank of issue deals in its own debt or its debts and credits — would be exploded at once.

It would also appear in what sense it is true, that there can be no undue expansion of "bank credits" (bank loans) or bank-notes, — in short, no bank expansion of any kind. If bank expansion ought to be in harmony with production and not with consumption, or in other words, commerce, then there is no undue expansion, and never has been through bank loans to producers and merchants. But bank expansion ought, undoubtedly, to follow Adam Smith's law, and if so, it ought to be restrained within the limits of commerce and not of production.

By this latter rule, either bank expansion or contraction has been going on continually for want of a limitation of it by reserve. In short, it is exceedingly doubtful whether it ever can be duly regulated. My friend proposes a plan, through consolidated redemption reserve, of the national banks, whereby the first step may be taken towards it, though many more will be required to reach it.

C. B. C. If what I have just heard is true, what folly have I been guilty of in proposing a winding up of the national banks and substituting my plan of government issues for bank-notes! But if banks have been the cause of so much overproduction, why would not a currency consisting of government issues and gold and silver without banks be better than a convertible currency with banks? There is no probability that O. P. E. and his friends will ever give up their opinions, and, until they do, reform is impossible. The only reformation they can attempt with any logical consistency is to get rid of gold altogether as soon as they can.

N. S. B. There is much truth in what you say. A currency of three hundred millions of treasury notes and five or six hundred millions of gold and silver, without banks, would furnish a currency which would maintain equilibrium between production on credit and consumption, between money paid to labor and money received in exchange for the products of that labor. But it is folly for practical men to waste time or money in maintaining the policy of adopting such a plan. It would be in substance the French monetary system, or rather absence of system. It would leave loans to be made under the restraint of natural laws which govern commerce, and through commerce the distribution of money. It is utterly impracticable to carry out such a plan. Even if all bank-notes were retired, deposit-loan banks would continue as before. There is but one course for all who sincerely desire the prosperity of the United States, and that is, to urge a return as quickly as possible to the use of convertible bank-notes. The plan I have suggested as the first step towards regulating banking reserve of any kind is a good one. That is, to consolidate all the bank-note redemption reserves in a redemption bureau, and to allow the reserve to count as so much collateral security for the notes, at the same time retiring into the possession of the banks an equivalent amount of their securities now held by the general government. The only practical result my friend expects from his labors is in the future. The minds of men are occupied at present with the industrial and monetary condition of the country. They are ready to talk, to read, and to think upon these subjects. The seed of truth now sown may germinate and bear fruit to some practical purpose in the future. Banks are not the foes of S. L. and his friends. The banks and the manufacturers who have employed S. L. and his friends in the past, and the manufacturer who has just given him temporary employment because he is industrious and skillful, and most of the merchants of the country, are partners, the banks having a perfectly guarantied share of the profits in the shape of discount, and an imperfectly guarantied share through interest, while they risk the amount of their advances. The

difference between their risk and that of their partners is, that the capital of the latter must be exhausted before that of the banks can be touched. All the partners, including the banks, are not only willing, but anxious, to embark in further production as soon as they can. The only fault that S. L. and his friends can find, in truth and justice, if they were really able to master this complex subject of production and exchange, is that the producing partners ought to understand it better than S. L. and his friends. The fact is, that with one single exception they do not. The exception is, that the partners know very well that it is out of their power to produce any faster than they are now doing. The question of money they well know is an unimportant one. As practical men, they know the money is waiting for them wherever an opportunity to produce and sell offers. It is not capital that is waiting; it is the whole producing interest which has been exhausted, not only by the excess, but the cost of the overproduction. If prices would always remain steady, overproduction to this degree would be impossible, and, were it possible, less injurious. If railroad iron, labor on road-bed, and rolling-stock of a railroad built through a wilderness, or houses, warehouses, mills, factories, and municipal improvements in excess, cost no more at the wrong than at the right time, the loss would be less, and labor could be set to work again sooner; but the inexorable condition of overproduction to excess is high cost.

C. B. C. If your opinion is correct, bank books ought to sustain it, for they ought to show bank expansion when production and prices are both in the ascending scale. But, as you say, the English authorities are mostly against this view. They think that merchants overtrade, and not that producers overproduce.

N. S. B. You are right. Mr. Price deserves thanks for stating the whole question so fairly, and with such vigor and force, on O. P. E.'s side, and he is never illogical. He says that it is just as absurd to talk of an inflation of hats as of bank-notes. A more forcible, and, at the same time, truer expression in respect to production and the

auxiliary exchange of money which maintains it was never made. Does a manufacturer or merchant borrow more bank-notes than he needs? Never! The former borrows enough to buy his labor and his raw material, and the latter his merchandise, and no more. Excess is only relative. No matter how excessive the overproduction, no more bank-notes have been lent than were absolutely necessary to sustain it. If there is no such thing as *relative* overproduction, then production and commerce are alike in volume, and no excess being possible relative to production, there is none relative to commerce or consumption. But if overproduction is, contrary to the general opinion, not only possible but actual, then while there is and can be no excess of bank-notes relative to production, there can be and is very great excess relative to commerce and consumption. Production is, therefore, considered by itself, production only; considered relatively to real commerce, it is overproduction when a large surplus remains after all the exchanges possible have been made. When it has progressed so far that farther progress is impossible, there is a crisis in the production and the labor that supports it: the circulation of the bank-notes previously paid out for labor is largely contracted, because production has been contracted. The truth of Mr. Price's assertion is thus demonstrated. There is no excess of bank-notes absolutely, and none relatively, unless production of commodities ought to be kept in subordination to the commerce of commodities. If it ought, there is excess of bank-notes relative to actual commerce, while production is in excess of that commerce, and the worst of all its effects is the enormous cost which attends it. If the British writers, all of whom agree with Mr. Price that, although there may be overtrading, there is no overproduction, are correct, then it is idle to talk of an inflation or expansion of bank-notes or their circulation; such a thing is impossible: but they are not correct, for when the crisis in overproduction comes, there is no harmony between outstanding notes and deposits; the former may have largely, but the latter have enormously, increased within a few years previous; at least such ought to

be the fact, if it be true that there has been overproduction to excess.

O. P. E. Does not the expansion come from overtrading and speculation only?

C. B. C. If the expansion is always attendant upon commercial crises, I think N. S. B. has made out his case.

N. S. B. During the three years preceding 1857, in the United States, while bank-notes had increased only ten millions, deposits had increased forty-two millions, and contracted within less than a year after the suspension of the New York city banks by a like amount.

In England, before the passage of the Bank Act of 1844, and when bank-notes were merely convertible, deposits increased from less than eight millions in the autumn of 1823 to more than ten millions in the following February, and fell to nearly six millions in the following August. In the crisis of 1837 the phenomena were similar. Deposits increased from less than eleven millions in February, 1835, to more than fourteen millions in February, 1836, and fell to about eight and a half millions in February, 1838. Under the law of 1844, private deposits increased from less than eight and a half millions to nearly nineteen millions during 1846, and fell to less than seven millions in 1847. In 1857, in the United States, there were at least one hundred millions of gold hoarded. There has never been a want of gold, if properly used. It is certain, therefore, that although the principle upon which the issues of the Bank of England were founded in 1844 are sound, they were not carried far enough owing to the grand fallacy of a supposed difference in substance between the loans of banks of issue and those of banks of deposit. There was gold enough in England before 1844. What was needed was to maintain an even average of coin to bank-notes in actual circulation. A limitation of Bank of England notes by a reserve of one pound in coin for every three pounds in notes would have answered. Limitation was really the object of the act, although it was called by another name. The next generation of bankers and merchants will learn that loans are one and the same thing,

whatever the name of the bank that makes them; that the quality of all money is one and the same thing in the ratio of price and the equation of exchange; that the office of gold is one of limitation, and that limitation means keeping over-production from proceeding to a crisis. Labor, if it ever takes its first, true lesson, will learn that the accumulation of capital is the condition precedent of its employment, and that the remedy of all its grievances is to keep its surplus at the plow: at the plow, labor which is surplus elsewhere ceases to be surplus. There is no danger of excess there.

C. B. C. What will be the effect of a coinage of silver by the United States on their own account at the ratio of 16 to 1?

N. S. B. It may be injurious, if the act permits duties and interest on the public debt to be paid in silver, and the silver is allowed to get into circulation without retiring legal-tenders, as they are called, as fast as it is paid out. The surplus paper money must be retired before specie payments are inaugurated or soon afterwards. If the act were to authorize coinage at 15½ and 1, instead of 16 and 1, the silver would cost less, and it might be gradually paid out for two hundred millions of legal-tenders and the latter retired. Meantime, duties and interest might be, as now, payable in gold, and, on the return of specie payments, the silver would be on a par with the gold, as now in France: before that time it cannot be by any possibility unless the paper reaches par. If the United States are determined to coin silver without waiting for other nations, and wish to retain gold, they must limit the coinage, unless they coin at a rate low enough to make silver dollars as bullion worth gold dollars as bullion, and this would be a matter of luck and chance. Coinage at 15½ would be better than 16, because that is the old ratio of the present silver circulating in Europe. Ignorance of the whole subject is the only excuse for coining at 16 and making duties and interest payable in silver. It is very true, that either at 15½ or 16 enough silver may be coined in process of time to drive out all the gold after the return of convertibility and keep it out for a long time, if

there be no change of the coinage laws in any part of Europe; but there is a fair probability that the people would demand a rest before such an end were reached. To coin at 16 and make the interest on the public debt payable in silver is equivalent to paying in paper, and until convertibility is established that is repudiation: this is the right word for such an act, and besides it would be a needless and wanton sacrifice of the public credit by an act in itself injurious in other respects. There is danger of C. B. C.'s party being reinforced in some way not yet apparent, by the most reckless and destructive portion of the community; hatred of the banks, hatred of capital generally, and more or less of the destructive spirit of communism, will ally itself with that party. It is time for conservative men of all grades to unite and do their utmost to enlighten public opinion, now so grossly misled.

C. B. C. What answer would you give, Mr. N. S. B., in the name of true economical science, to the many laborers who, if not actually starving, are unable to earn full wages, because they cannot get full work, and to those laborers who have been driven away from their forges, factories, and shops, for want of being able to get any work at all? The only answer O. P. E. or myself can give is, that producers, capitalists, and banks are at fault. We can only say, in reply to their complaints, that producers would be able to hire them, if they could inspire a little more confidence in capitalists and banks, and induce them to lend. That is why I opened this debate, on my part, with such strong invective against the banks, and a threat to try to get rid of the national banks. I am consistent, but O. P. E. is not, for he finds no fault with the banks, although we both have the same theory about the impossibility of overproduction. Your arguments, I must confess, have shaken my opinions very much. How can you answer the complaints of labor in the fewest words, including that which is allied with communism?

N. S. B. My answer is, that communism, Fourierism, and St. Simonianism are in direct opposition to the fundamen-

tal fact which makes civilization possible. That fact is inequality of condition, with difference of capacity and inclination. Inequality made accumulations of capital sufficient to bring about production on credit possible; and difference of inclination made such accumulations certain.

Without production on credit, modern civilization, as we see it in France, England, and the United States, is impossible. It is restrained within its natural limits in France, because the largest part of her money is gold and silver, and she has no banks. The answer to the demand of labor, therefore, is, that it is largely out of place in the field of production; it has sent too many hands to towns and cities, shops, factories, furnaces, and looms. There is no possibility of overproducing the absolute necessaries of life, and there is abundance of land. If labor is out of place, capital is equally so, and one has as much justice in its complaints as the other. What is now going on is a rectification of the mistakes of both, by an heroic remedy, which will require time. If the communist who is out of work and believes that the capital which employs him is robbery, and that unless after it has employed and paid him it will also hand over its share of the product, the accumulated results of his and his fellow-laborers' work ought to be fired with the incendiary's torch and consumed, to furnish him and them, by rebuilding, the work they seek, and revenge for not having found work before, the short answer of true science, aside from that of justice, is, that he is maltreating the cause of civilization, which has unfortunately missed him, leaving him still a savage. He is either wilfully idle or has put himself out of place in the field of production, and he can have no relief until he finds it.

Capital in the United States has surrendered itself largely, in some of our great cities, to the communistic part of society, as it presents itself in the character of those who live on taxes without paying them. A currency reform like that which you have heard me advocate is the most important step towards reform in this particular in the first place, to be supplemented by the adoption and inexorable application

of a law which shall restrict the right of voting for municipal offices within proper limits. The civilized instinct must assert and maintain itself against the savage.

S. L. What have the workingmen at large of the United States to do with this question of misgovernment, waste, extravagance, and heavy taxation, in cities?

N. S. B. As a whole, not much, I admit. Taxes are not levied in accordance with the wishes of those who pay the largest share in cities and towns: a reform must take place, in course of time. The workingmen of the United States are not responsible for the present condition of the cities and towns. Workingmen like you, S. L., are indispensable to civilization; but remember that producing and loaning capitalists are equally essential, while they take all the risks, and you workingmen take none. You are paid for your labor in advance, and capital takes the chances of a market. The first risk of a sale is taken by producing capitalists. They get nothing until a sale for cash is made.

O. P. E. Do they not get cash as soon as they find a merchant who buys by the aid of a bank loan?

N. S. B. They get borrowed money, but not cash, in the sense in which I use the word. By "cash," I mean money received on sales of labor's product in a producing consumer's market. Producing capitalists pay loaning capitalists (banks included) interest in advance, for the most part, as their share in the joint result, the latter only risking actual advances. The producing and trading risk, which is all one, is divided between these capitalists, the latter of whom guarantee the former. If the payment of interest and wages, or even wages alone, depended upon cash sales, there would be little danger of industrial crises; probably much less than fifty per cent. of the grand total of wages now paid in advance, reserved and made contingent upon such sales, would be a good guaranty fund.

Of the three partners, — Labor, Producing Capital, and Loaning Capital, — Labor alone takes its whole share in advance, and takes no risk. Of these partners Labor ought to be the most conservative, as having the greatest interest in

maintaining the credit of the general government. It has large investments in savings banks, and would lose most by general or partial repudiation of the funded debt of the United States, whatever form repudiation might take. Of all the partners, it would receive most injury from C. B. C.'s paper money scheme or anything like it. After we adjourn, let C. B. C. and S. L. remember that I have proved to a certainty little short of mathematical, in this debate, that while money in use is but a process chiefly for the distribution of the fruits of labor and the purchase of labor in order to produce those fruits before a market is found for them, of which capital takes all the risk; and while, therefore, whatever makes such distribution and purchase must of course be money, it is a necessary corollary from the demonstration, that gold and silver distributed throughout the commercial world, and found where commerce left them, are the safest and steadiest in value of all forms of money. The present currency contraction, as C. B. C. calls it, is only a contraction of production towards the base line of the absolute necessaries of life; and an issue of more paper by the general government could not be made unless gradually, in lieu of taxes to a like amount; for no bondholder would surrender bonds for paper. Repudiation of the paper would be the logical result of such issues indefinitely continued, while the bonded debt would remain. Labor would suffer more than capital; but one good result might follow for the next and after generations: the American people would be effectually cured of all love for such paper money, and this cure might lead ultimately to the establishment of a sound system duly limited by gold and silver. O. P. E. and C. B. C. are both writers of note upon the science, so called, of political economy. They do not differ materially upon the leading doctrines or propositions of that science, as now taught, except as to this question of issuing more paper money by the general government. Their opinions, as expressed by themselves in this debate, are fallacies; they are absurdities in terms. If O. P. E. is right, there is less benefit to be derived from getting back to the use of convertible paper money than is generally supposed.

He contradicts Adam Smith in most particulars, because he says credit transactions at wholesale, as he calls them, are not, and ought not to be regulated by gold. If half the commerce of the commercial world can dispense with gold, the remaining half, and therefore all commerce, can do so; and by his own showing convertibility is a shadow. He, as well as C. B. C., says there can be no overproduction, and C. B. C. carries this doctrine to its logical conclusions, by asking more money. C. B. C. and S. L. say money is scarce, and they desire to see it plenty. To affirm that money is scarce, however, is just as absurd as to affirm that wheat and provisions, cloth, iron, and furniture, are scarce. If C. B. C. and S. L. will, for the next six months, when they find themselves about to say that money is scarce, stop a moment to think, and then say instead, that the great contraction of production has made the opportunities to exchange labor for money wherewith to buy the necessaries of life scarce, it will cure them of their absurd ideas about money more effectually than my demonstrations. Remember that excess of labor at the base line of production is impossible: there can be no overproduction there, but there is periodically an excess of it away from that base line, and no regulation, no limitation of that excess, is in the present state of civilization possible, except by a currency of gold and silver, or one duly limited by gold and silver. This is a lesson which all the nations and colonies of the Anglo-Saxon family must and in time will learn, and when they have learned it, they will teach it to other nations, and the world of production, industry, and commerce will be in a better condition than now.

O. P. E. Before adjourning, Mr. N. S. B., let me ask, whether in your opinion the Scotch banks of our time constitute an exception to the law which you claim to have demonstrated in relation to all banks.

N. S. B. The Scotch banks are undoubtedly well managed, but being, as I have shown, like all other banks, partners with their customers, who are engaged almost entirely in producing and trading, they suffer with these, and the latter of course suffer in company with the producing and

trading people of the whole kingdom. The Scotch system of credits, granted upon adequate security to all producers, even farmers, to be repaid by instalments within a certain period at the option of the borrower, is conservative and judicious. It is the best possible method, except a duly regulated reserve, of ascertaining whether production is gaining too rapidly upon consumption. If in a large Scotch bank daily deposits equal daily payments upon an average of six months, the banking is sound; if such be the case in all Scotch banks, the reserve is of little consequence. Have you forgotten one of the most important demonstrations I have given in this debate? I have demonstrated very clearly, as my friend has done in his work, that if *all producers* could and would produce no faster on short averages than cash markets could be found to take and absorb their products, good, well managed banks would require no reserve at all. Bank debt in the shape of notes, or notes and credits, would be sufficient. The Scotch banks undoubtedly come as near to maintaining Adam Smith's law of equality between the incoming stream which supplies and the outgoing which exhausts bank money as they possibly can without adopting the law which my friend propounds in his book for all banks, — a ratio of metallic reserve to loans and bank debt, varying only within short periods.

C. B. C. If what you say about the Scotch banks is true, why cannot some plan be adopted for the use of bank debt as money, without the expense and inconvenience of gold and silver?

N. S. B. I have demonstrated the impossibility of making such a plan work successfully as a rule. There is no certain method of ascertaining whether production is in advance of cash markets but by a metallic reserve, or in other words a metallic limitation of loans to all producers. Metallic units have a limitation in the material of which they are made; paper and credit units a limitation only in the will of the issuers. The mistake which you and your party make lies here. You are right in saying that paper money issued by a government like that of the United States is

money, and good money too; it is as certainly money as gold and silver themselves. If it were limited precisely to the same extent as gold and silver, it would be even better, in the sense that it would be a more convenient kind of money for commerce. But because it is not so limited (you and your party are clamoring for more), it has been and still is more a curse than a blessing. On the whole, it has probably done much harm and some good. If it be true that the United States could have sustained their wars for independence and the preservation of the Union without issuing paper money, then beyond all reasonable doubt more loss than gain has resulted from government issues, but it would have been rash to make such an assumption in advance, because gold and silver hide themselves in times of grave political as well as social and industrial crises. One thing, however, admits of no doubt, and that is, that as soon as the national crisis had passed, government paper money ought to have been retired, except to a very moderate amount, as quickly as possible, because it had then accomplished all the good it could do, and thenceforth was a curse instead of a blessing: this is the proper term to apply to it. England suffered much from it; the United States are now suffering from it, and France has wisely retired it. Convertibility at as early a day as possible is what every producer and laboring man ought to desire, and would, if he understood his own true interest, although you are right, Mr. C. B. C., to some extent, in saying that convertibility is a sham: it always will be a sham in an economical sense, until the object of convertibility in point of science is understood; and it never can be understood until the logical inferences and corollaries following from the premise, All forms of money are but means to an end, and the value of all money is conventional, are generally admitted among scientists. Until it is ascertained that the true office of gold and silver in the reserve is one of limitation of loans, there will be panics, crises, and "revulsions," and even afterwards there will be more or less disturbance, because of the constant tendency of laborers and producers to get away from the base line of production, like an impatient and thought-

less army which clamors to leave its first line of support. The crisis which is now going on is rectification by this base line. Exports are continually gaining. We are receiving back much of our national debt which we improvidently lost in exchange for British and French products in the shape of iron, cloth, velvets, silks, etc., at high prices, and there is some danger of our being asked to take it back too rapidly. We are paying up now in wheat, provisions, cotton, petroleum, and other raw produce. We are "producing" less in the shape of iron, cloth, etc., ourselves, and economizing in the use of all these articles. The more we economize in these, the less we import, and so much the greater the export relatively of the articles named. So long as this difference increases, we shall have "hard times," and the laborers who have worked at our looms and forges, as well as manufacturers, and in short the whole community, will complain. When the balance turns the other way, then remember that production is gaining upon cash markets, and we shall begin to see "good times" until the inevitable crisis comes again, — inevitable, I say, because it must come in some form, until we learn how to limit production everywhere at some point by cash markets. Excess of labor at the base line is impossible. To "advance" labor above and beyond that line is essential, however, to civilization, but there is constant danger of its proceeding to such excess that rectification by a crisis becomes necessary, so long as there is no limitation of production on credit by metallic reserve. The reason is, that the overproduction of cloth, of iron, of iron rails, and railroads, municipal improvements, buildings, etc., is disguised in the high prices which overproduction always brings with it, until the inevitable crisis comes. The result is, that before we know it our base line of agricultural production and population becomes too small for the superstructure which is reared upon it. That superstructure is built up, not only by the labor of our producers and their workmen, skilled and unskilled, but by that of the producers and laborers of England, France, and other nations with whom we deal. All these foreign laborers are engaged in working up raw material into

products for which we pay high prices. We buy most of their products when at the highest price, because production is then in the ascending scale, at least in England and the United States, and a crisis happens usually in both countries at the same time. The economical debt which labor above the base line, whether paid for in England or the United States, owes to labor at that line, can only be paid by increasing labor there, and decreasing labor elsewhere. The articles in which the debt is being paid are being sold at moderate prices: the articles the purchase of which was made with our government and corporation debt, were bought at very high prices. If production on credit in both countries, or in the United States alone, had been duly limited, we could have built all our railroads at lower prices and with iron of better quality. It was not the want of adequate "protection" which caused this; it was the want of a due regulation of production. Unless our economists shall in season be able to ascertain the cause of the mischief and a remedy, there will be danger of social and political disorganization. The young men of New England have left their paternal acres, not altogether to find acres elsewhere, but also to go into cities, towns, and villages. Production on credit is the life of modern industry, but we have carried it to excess at this early period of our national existence. It has already carried up the cost of living to such high figures as to interfere seriously with the increase of native population. I have demonstrated to you plainly, in this debate, that the cause of high prices is excessive production on credit, not merely in the United States, but abroad. The United States suffer from English production on credit more than Englishmen themselves, for we never buy English railroad iron unless it is at the highest price: we pay largely in railroad and other debentures for iron and other articles thus bought, and we pay the interest and eventually take up the debt in the costly manner before mentioned. We are immensely the losers, even after we deduct those debentures which yield no return. For all this mismanagement our economists have no name but speculation; — speculation, did I say?

They will hardly allow that it is speculation: they call it, after the English example, overtrading. They have never defined speculation, and they probably — the most of them — confine it to buying too many town and city lots at extravagant prices, and trading in stocks.

C. B. C. If convertibility is a sham, why return to it?

N. S. B. Because the evils of any convertible currency are much less than those of an inconvertible one. Prices cannot be carried so high, and there is much less industrial disturbance. A crisis is sure to come with any kind of currency, when producers on credit and lenders are not duly checked and limited by metallic reserve, but the extent of the evil is less under a convertible than under an inconvertible currency, where a large volume of paper is issued. Had the United States issued only one half the paper which was actually issued, the range of prices, the disturbance of industry, and the resulting losses, would have been much less.

O. S. B. Before adjourning, I think I ought to say that I have read the report of this debate by N. S. B. in manuscript up to the time of our last adjournment, and I recollect very well what has been said at this meeting. The report is correct; but it seems to me, that without further explanation, some of O. P. E.'s remarks, although reported in the very words he used, will appear like a travesty of his real opinions. He has used such plain and homely language about gold and silver coin being commodities, bartered like a ton of iron or copper, a cow or a horse, for that which is given in exchange, that every reader will consider the present school of economists, who, although they use the same words, give them certain qualifications, as caricatured instead of fairly represented by N. S. B.'s report.

O. P. E. That may possibly be the case, but if gold coin is a commodity, it must certainly be bartered when it is exchanged for another commodity: the only difference between this and primitive barter is that gold and silver are commodities which are always received in exchange for other commodities. Cattle, iron, and copper have been thus used. It

is hardly possible to misrepresent me upon that subject. If a commodity is used in all instead of only a few exchanges, it is still as much a commodity in the former as it could be in the latter, and the exchange is none the less barter. Adam Smith and most of the British economists after him have maintained that the cost of gold and silver reckoned in labor is the measure of their value in exchange for other commodities. Hence it follows that they cannot lose any part of this value by an overissue of bank-notes, or an undue expansion of bank loans. Some of the late British, and I believe all the American writers, deny the truth of Smith's proposition, because it is no more true of gold and silver than of other commodities, but we — at least the most of us — insist that for other reasons, gold and silver never depreciate in consequence of an overissue of bank-notes or undue expansion of loans. To admit the contrary would be illogical. We are estopped from doing so when we affirm that gold and silver coin are commodities and subjects of barter, while, on the other hand, bank and government notes and bank credits are, as you correctly say, only units, having value in virtue of conventional use.

N. S. B. You have stated the case on your side fairly with all its contradictions. I say contradictions, because you are logical and illogical at the same time. You are partly logical and partly illogical in your inferences from your premises, and you are illogical in framing your premises. The reason is, that you assume each of two contradictory propositions to be true. It is comparatively easy to draw inferences, — even madmen can do this with great accuracy; what you lack is logical perception of the fallacy which lurks in your premises. You say true money is a commodity, universally received. To give absolute precision to your expression I suggest an amendment to this effect: in all equations of exchange between buyers and sellers gold or silver coin is always, by general consent or law, placed as a commodity on one side of the equation, if its owner chooses to put it there. Adam Smith, in his masterly refutation of the absurdities of the mercantile theory, says, "It would be too ridiculous to go about

seriously to prove that wealth does not consist in money, or in gold and silver, but in what money purchases, and is value only for purchasing." [1] While, however, he demonstrated the absurdities of that theory carried to their logical conclusions, he left the root of the theory unmolested, by asserting that gold and silver coin are commodities whose value is measured by the labor they cost. You differ from him only in denying this assertion. Mill, without any important variation, adopts Smith's opinion. Mr. Bonamy Price, although he asserts, on page 190 of his "Principles of Currency," that bullion (in coin) is neither wealth nor capital, asserts elsewhere that it is a commodity and a tool, — the only real money in the world. These writers all assert that gold coin is a commodity, adopted as a universal equivalent. If the latter branch of this proposition is true, the former must be false. Gold and silver are said to have intrinsic value as money, that value making them the only real money. This assertion must be false, also, for the same reason. A commodity must have real value, founded upon some qualities it possesses in itself, according to the opinion of those who are ready to buy it. If it possesses no such qualities, it cannot be a commodity. How, then, can gold and silver coin as money be commodities? Their value in the equation of exchange is, according to all these writers, assumed and conventional, and not real. But it is impossible that assumed or conventional value can be given to anything without at the same time making it a unit and nothing more or less in the equation where it is placed. All money whatever, values and pays by units, and it is for this reason alone that paper money and money in the reserve, or bank money, is so extensively used. The fallacy in the premises must be eliminated before you can really understand what money is. The premises, therefore, must be amended. The value of all money being conventional, necessarily resolves itself into a series of units in the ratios of valuation and equations of exchange between buyers and sellers. No money, therefore, can be a commodity, or the subject of barter. The premises correctly stated, even

[1] *Wealth of Nations*, p. 330, 4th London ed., by A. Murray.

according to these writers, will then be: All money whatever is a series of valuing, purchasing, and paying units. One of the inferences from these premises will be, that in general price will depend upon the total number of units of commodities exchanged, and the total number of units of money on hand to make the exchanges; and subordinately and particularly upon the number of units actually employed for that purpose by holders who come into possession of them in exchange for things sold or by loan. Another inference will be, that metallic units, duly distributed, must furnish steadier prices than any other kind of money possibly can, and that the most important office of banking reserve is to furnish a well-defined limitation to the number of units which can be carried into the markets where labor is for sale, and thence to the markets where commodities are for sale. Keep the number of units in the former markets steady, and you will be sure to find them steady in the latter. It is certain that all commercial and banking crises arise directly from excess of labor in certain quarters, and remotely from excessive loans. You must learn the true theory of money before you can fully understand the meaning of the remarks which the practical sagacity of Adam Smith induced him to make about metallic banking reserve for paper money and the necessity of applying, if it be practicable, the same rule to all banking reserve. Having mastered the true theory of money, you will then be prepared to investigate the subject of production on credit, and of compelling it, by means of a metallic limitation of loans, to bring all its wares to a cash market within comparatively short, instead of comparatively long, periods; thereby gaining certain great objects — steadiness of labor, of production, of wages, of profits, of taxes, of interest, and of mercantile and money exchanges; and C. B. C. and his followers may possibly get rid of that monstrous fallacy which lurks in their assertion that money is scarce.

C. B. C. Cannot government paper be limited by metal, as well as bank paper? If it can, why not retire the paper of the national banks by that of government?

N. S. B. So far as the banks themselves are concerned, it would be to their advantage, in my opinion, to retire their paper in the manner suggested, and save taxation, but it is absolutely necessary for banks to issue the paper in the first instance by loans, if we are to have a metallic limitation of paper, whether it be that of government or banks. The general government can only do it by establishing banking offices throughout the country, and doing a general banking business. This is out of the question, and therefore the paper must be issued by the banks, even if furnished by the government. They can obtain it of the general government by buying it with coin, but they would gain nothing by this course. They would be at the expense of furnishing the public the conveniences of a paper currency for which they would pay gold and silver, dollar for dollar. It would be cheaper for them to use gold and silver, and then we should have no paper currency at all.

C. B. C. But why cannot the government issue its paper directly, according to my interconvertible bond and currency plan, or some other?

N. S. B. My demonstrations have been lost upon you, I fear, after all. Have I not already said that we have economized gold and silver through banks; that the economy has been effected and that it must therefore be continued through bank loans? It would be very well to substitute government for bank paper, if it could be done, but there is no method of doing it, unless the government turns banker. You desire to increase production on credit by furnishing work for labor. How can production on credit take place without loans? There is, furthermore, as I have just said, no possible method of furnishing a metallic limitation to paper money without banks of some kind, and inasmuch as the paper of state has been retired by that of national banks, the general government will soon have an opportunity of establishing, through these banks, a metallic limitation to paper money by requiring them to consolidate their reserves for redemption of notes in a redemption bureau under government control; liberating to that extent their collateral

securities for notes in the shape of government debt. This would be the first step toward metallic limitation. To retain note circulation is of no great importance to stockholders in national banks, but it is of great importance to the citizens of the United States, or, to speak accurately, it would be so if the true object of banking reserve were understood.

C. B. C. Since this debate opened, Congress has passed an act for the coinage of silver. Will not this help in the way of furnishing metallic basis or limitation, inasmuch as gold is scarce?

N. S. B. Government paper to an equal amount would answer quite as well after return to convertibility, unless the coinage of silver proceeds so far as ultimately to drive out gold. There is not the slightest benefit to be gained by the coinage of silver, in point of science, until the commercial world is ready for it, and if it were stopped short of that point, government paper would answer, as it now would in Germany and France, if convertible into gold. Congress might have saved three per cent. by coining silver at the European rate of 15½, making government debt and interest payable in gold as heretofore; and then upon the return of convertibility, if the silver coinage were not allowed to proceed so far as to drive out the gold, silver and gold would be on a mutual par as in Germany and France. Silver would thus follow the course of government paper. It would be on a par with it from the start, and, in company with it, rise to the par of gold, upon the return of convertibility. This will be the case with the silver now being issued at a heavier cost by three per cent. To coin silver, if silver we must have prematurely, at this additional cost of three per cent. was an ill-advised act, undoubtedly, but it is of comparatively little importance by the side of the entirely useless and wanton injury to the high credit of the general government in authorizing its debt and interest to be paid in silver, although this may never happen. If one hundred and fifty millions of silver could be coined before January 1, 1879, and one hundred and fifty millions of government paper retired by sale of bonds, the silver might be used, perhaps, in

company with gold to maintain convertibility, and that established, there would be probably a general desire to stop the further coinage of silver. As to silver or gold coined at a barter rate in excess of that of the commercial world, or in other words, in excess of its bullion value, I say in answer to your question, that its utility in the way of limitation of loans and of prices is thus to a considerable extent lost. Money having only conventional or assumed and therefore no real value in all equations of exchange, it is mathematically impossible for it to be a commodity. It is impossible for anything to have a conventional and real value at the same time. It cannot be money and commodity at the same moment. A ten dollar government or bank note is a good debt if the issuer is solvent and willing to pay; but when used as money it is not at the same time used as a debt or claim against the issuer. It has conventional value as ten units of money, and real value as ten units of debt. As money, it is worth only what it will buy; as a debt, it might or might not sell at its face. The value of gold and silver used as money is of the same character. It is as easy to assume that the government or bank note is worth ten units called dollars, as to assume that a gold eagle is worth the same number of units. The note and the eagle, being equally and alike conventional, must have value as units only in the equations of exchange. As it is mathematically certain that conventional value in the equations of exchange cannot be real value, because it would be a contradiction in terms to assert that it could be, the gold eagle must value as ten units, as does also the note. Hence, in order to obtain the highest possible degree of steadiness in prices, and the most perfect limitation to production on credit, the value of the metallic unit as money ought to harmonize with and be equal to and not in excess of its value, regarded as commodity or bullion. If money were really a commodity, gold and silver would not furnish this steadiness, nor this limitation; neither would overvaluation of silver drive out gold, nor overvaluation of gold drive out silver to other countries. But because all money values in the character of abstract units in equations

of exchange, each nation determines for itself the quantity of metal its gold and silver metallic units shall respectively contain, and if it varies from the barter rates of the metals used for that purpose, it follows with certainty, and not a mere trading probability, that money can be made by exporting the undervalued bullion, if we assume the undervaluation to continue. The present condition of the silver bullion market is a practical proof of what I have said. The rapid building of railroads, mills, factories, cities, and towns comes from production on credit — or, in other words, these are largely built on credit. The mischief would be much less if this rapid building were not so costly. If our railroads, which do not more than pay running expenses, had cost less by one half; if municipal improvements, for which heavy taxes are paid, had cost in the same proportion, the burden would be comparatively light. Were they not built or made at all when production on credit is at its highest, they would not be built or made when it is at its lowest stage, however cheaply, because productive power is then exhausted. They must therefore be constructed at the most costly rates possible, or at moderate and average rates. These are the only two practicable modes, and the latter is the alternative I propose by a metallic limitation of bank loans, with a coinage everywhere at the same rates. The base line of agriculture in the United States, whence are furnished the raw material and the absolute necessaries of life for American and all the foreign laborers and producers whose products are taken in exchange, large as it is, is not large enough to support all the laborers and producers who are furnished thence with their raw material and necessaries. If twenty per cent. of the surplus capital of labor in savings banks in the United States had for the last ten years been regularly invested in cheap lands, and twenty per cent. of the laborers had settled and remained upon them, the labor crisis would have been comparatively light. It is perhaps impossible to convince labor, but it is true, that an excess of labor, away from this base line, both in the United States and the countries trading with them, is the cause, not only of the sufferings of un-

employed labor, which it is now without any reason laying to the charge of capital, but of the losses and misfortunes of capital itself. Metallic limitation of production on credit is the only remedy for labor as well as capital, by keeping all units of money in harmony, not only with units of commodities produced, but also within comparatively short instead of comparatively long periods, in harmony with units of commodities consumed, and units of capital, sold for cash, not borrowed. This is the object in point of true science, in keeping a metallic reserve, and to have this effect, it must be kept in the manner already indicated.

In the metallic units which the reserve holds, it has a limited number of units of money which, if not artificially depreciated, ought to have the same value as units throughout the commercial world, because the metal which furnishes them will furnish an equal value in money units everywhere, if the coinage is at bullion values. The whole producing and commercial world is now suffering a reaction. Great Britain is at its head, but she suffers less than the United States, partly because of the enormous extent to which labor has been called away from the base line in the latter, to cities, towns, looms, and forges, by excessive issues of paper money, distributed and redistributed to labor through bank loans. Whenever there is a reaction from excessive production in Great Britain, it must, of course, extend throughout the commercial world, although the present reaction in Germany is, to a great extent, only a coincidence arising from national causes. Both action and reaction are continually gaining in power, as one crisis follows another throughout the commercial world. A duly regulated monetary system would not entirely remove the mischief, but it would mitigate it. If it be really true that the great advance made in this century in all countries, and especially in the United States, in the machines and tools of production, — in other words, if the advance of civilization has already endangered the cause of civilization itself, by the constantly increasing intensity of the reaction from constantly increasing production which such improvements have rendered possible, by a constantly di-

minishing expenditure of hand labor, the limit of production has been already reached; but this is a great fallacy. The danger is not in progress, but progress so rapid and costly as to threaten social disorganization. The only available check lies in putting some limitation upon production on credit short of a great industrial crisis. I know of no practicable method, and I can conceive of none except through the use of money, and it lies in loans, because through loans only can production on credit be maintained, advanced, or arrested. To return to metallic money in its relation to production, there is in science no such thing as token circulation.

If there were no international commerce, there could certainly be none, even in name, for gold and silver. No nation or sovereign could coin tokens except of some other metal and upon the same principle with paper money.

After fixing the quantity of metal for its metallic gold and silver units, it could not afterwards make it less without at the same time causing the new as well as the old coins to lose purchasing power in proportion, and the heavy coins would lose equally with the light, because conventional value attaches to the unit, and not to the bullion which makes the unit. Bullion value is the result of the unit value, and unit value depends upon the whole number of units. If the total number of units of a certain weight be one hundred millions, an increase of their number by one million through change in quantity of metal for the unit, by adding one per cent. to the total, would cause loss of purchasing power in each unit — those of full as well as those of light weight — in the proportion of one million to one hundred and one millions. This rule will not apply to the commercial world, because, although one country, in many respects, for purposes of commerce, it is composed of many countries politically, and foreign coins can only pass by comity, and never unless of full weight. Were it otherwise, the benefit of metallic limitation would be lost in the conflict of laws and rules of different countries and mints. If, however, there were but one mint for the whole commercial world, the result would be the same as if there were but one country, and what is called

token coinage would be impossible, because the depreciation would extend to all coins in the world. This is one of the results which follow from the fact that money is not a commodity; appreciation and depreciation take place in the unit and not in the bullion of which it is made.

C. B. C. What do you mean by that?

N. S. B. I mean that every government and the governments of the commercial world together, if there were but one mint, could coin units called dollars, pounds, or francs, of less metal than formerly, and pay their own debts, and allow their citizens and subjects to pay their debts with the new units, although the debts were contracted when the old ones were alone in use. This would depreciate all the money units alike, and appreciate the units of goods. To increase the metal of the unit would have a contrary effect. The depreciation and appreciation here take place in the units by increasing their number in the former and decreasing it in the latter, without reference to the quantity of metal. This could not be done if money were a commodity. There is a limit to this power resulting from the unit theory, which I will hereafter notice.

To obtain the full benefit of metallic limitation, therefore, all countries should unite and adopt the same ratio. The advantages of metallic limitation are lost to a great extent by silver coinage in the United States at this time. The want of a clear, logical perception of the difference between the metallic unit and the bullion out of which it is made, necessarily arising from its conventional use, which, by limiting the possible number of units, if standard quantity be adhered to, maintains *in the abstract* their purchasing power with mathematical exactness, prevents you from discovering the agency of money in production on credit more than anything else. The notes and bills of sound merchants and other producers are given to banks in exchange for bank-notes or credits in bank; so far as production on credit is concerned, it is immaterial which. Suppose these producers, instead of exchanging their debt for bank debt, to use their own notes in convenient amounts, without any

liability to redeem them in coin, however, but only to furnish exchange on national and commercial points, all issuers being mutually responsible for all issues: the notes would be paid out to labor, and if labor's products sold for cash within short periods there could be no expansion of prices and metallic limitation of production would be unnecessary. If labor's products would not sell in this manner, however, but accumulate until stopped by the reaction of a crisis, there would be great and constantly increasing expansion of prices until the crisis, and then prices would fall and money would be "scarce," although there were no change in the quantity of mercantile money outstanding. Mercantile money would become redundant as "greenbacks" and bank-notes are redundant now. They could not have been redundant at the time of their issue, however, because they were all paid to labor as they were issued: they were never in excess of production when issued, but they have been made redundant since by the falling off in production and the labor which supplies it.

The primary redundancy, therefore, was in labor, paid, fed, and supported, in bringing to pass a relative surplus of results ahead of time, and at increased cost. If labor, to a certain amount, could have been kept from the beginning at its proper place, expansion of production and prices by the aid of mercantile notes would have been impossible. The principle is the same with bank-notes and gold in the reserve, or bank credits, if we assume the units of the latter to be paid out in equations of exchange through checks. Metallic limitation of money units and their circulation, by whatever process they may be placed in such equations, is the only remedy which science offers for the mitigation of the evils referred to.

C. B. C. Does it not follow from your demonstration of the fact that in point of science the essential difference between metallic and paper money lies in the comparatively steady limitation of the number of units which can be obtained by sales and loans through the former, that governments ought to issue the latter as well as the former?

N. S. B. I have said, and I repeat, that it does, if govern-

ments could and would furnish the paper in accordance with Adam Smith's law. After all I have said, you do not yet understand what that law is. Smith wrote his "Wealth of Nations" within about twenty-five years after the period when the Scotch banks had, for the first time, supplied all the paper money, which, to use his language, the circulation of the country could easily absorb and employ. He, therefore, in view of his opportunities, as well as his sagacity, is entitled to great weight as an authority, aside from all demonstration, when he says the paper money of a country ought not to be in excess of the metal whose place it takes. He only lacks logical precision in not having added that paper money must necessarily more than fill the place of the metal, because it adds to the total of money precisely as so much additional metal would, and, therefore, will more than occupy the place of the departing metal. Hence it follows with certainty, that although Smith, in making this assertion, and the additional one that sound banking requires that within short periods payments ought to equal loans, laid down the correct rule, the complex development of banking since his time demands a demonstration of the applicability of the rule to deposit-loan banks. This cannot be done without showing that all money, metallic included, is but a series of units. The metal in a piece of coined gold is not money: the units which it furnishes are money. Hence bank-notes and bank credits, if we assume the latter to pass in equations of exchange by checks, are money because they furnish units taken in exchange for commodities. These credits, if thus used, are money, as well as the units counted out by gold. All commodities would cease to be such if used as money is. The precious metals are distributed, as I have repeatedly said, by international and national commerce. Each country takes what it needs and no more. Economy of metal comes through banks. Had there never been a bank of issue or deposit-loan in Scotland, England, or the United States, there would have been no economy of metal so far as they are concerned. France and some other countries, but France especially, would have had less, and

they would have had more; and the purchasing power of the metallic unit would have been greater, or, in other words, prices would have been lower than now. The distribution, however, would have been uniform in proportion to commerce. It is the same now, except that greater economy of the metal in these countries than in France makes their distributive shares relatively less. This distribution is very uniform, and hence the economy of metal in these countries ought to be uniform if steadiness of production and of prices are to be maintained; and here in its proper place comes the question, which sound monetary science is alone competent to answer: How can paper money and the reserve of deposit-loan banks, or, what from a subjective point of view amounts to the same thing, units of bank debt standing to the credit of depositors and which they are supposed to pay out by checks, be kept in a definite ratio with the metal which has thus been, and is always being distributed; increasing and decreasing, or in other words varying, only as the metal thus distributed increases and decreases, or varies? That is the real question. If governments can furnish government notes and government loans in these proportions, it is highly desirable that their ability to do it should be at once demonstrated by those who assert it. But it is entirely out of the question, because governments cannot go into banking. None but those who issue bank-notes or pay checks can keep a reserve of this kind, for such a reserve is a matter of banking entirely, and therefore an affair of producing and trading. This means that the producers and traders, who by borrowing become partners of the banks, sell as fast as they produce after a certain stage of production indicated by the reserve is reached. This, of course, is practically an impossibility. Friction must be taken into account when mechanical powers are actually applied. Production on credit would be stimulated to a considerable extent by bank loans, even if the steadiest possible ratio of reserve were maintained, but the average would be brought up short of a crisis. This I have amply explained before. The reason, therefore, why governments ought not, as a rule, to issue

paper money, is because they cannot do it in accordance with the law stated.

C. B. C. Cannot the profits of the issue be appropriated by governments?

N. S. B. Wages must go to those who furnish labor, and profits to those who furnish capital and pay expenses. To ask whether the banks will pay the expense of keeping a metallic reserve, and all the other expenses of maintaining a paper circulation, and hand over the profits to government, is simply ridiculous. The nation saves something by the economy of metal, but the cost is very nearly equal to the saving. The convenience of checks and paper over metal is the most important gain, and it is great: the impossibility of giving up the use of these, and the enormous fall in prices which would follow the abandonment of banking, admitting its possibility, make banks indispensable; the profit on their circulation is a small matter. The great financial misfortune of the day is that monetary and banking science has not progressed sufficiently with thinkers and writers, bankers, merchants, and skilled laborers, to make it apparent that the general government ought not now to lose the control over banking which it has acquired through the national banks. Banks are indispensable, but it is important and every few years becoming more and still more important for the general government to regulate and control them. There is great danger that this control will be lost by forcing national banks to wind up through crude and ill-timed legislation. To no important extent can labor be stimulated by government issues alone, without the aid of bank loans. Under no circumstances can the issue of government paper, save within the narrow limits already indicated, be justifiable, except in some great national crisis like that of our civil war. Metallic money was hoarded, and government issues furnished a substitute of the best possible character. The issue was, on the whole, too large, and after the first two hundred millions of bonds had been sold, and perhaps from the start, the interest on future issues ought to have been made payable in paper until after a general resumption of

payments in coin; but the grand mistake was in not funding the paper money in sufficient amounts and returning to convertibility long before this time. The interest of all classes would have been promoted, and a large part of the surplus of unemployed labor, still found in cities, towns, and villages, would have been employed in improving and cultivating land; there would have been much less debt and more moderate taxation. If, by good fortune, convertibility shall be not only inaugurated on the first day of January, 1879, but maintained afterwards, if possible, by the funding of all surplus paper, the national banks relieved of either national or state taxes, their reserves for redemption of notes consolidated, and municipal taxation hereafter duly limited, production on credit will advance rapidly enough and we shall have "good times." If capital in cities and large towns can be protected in no other way, it must be done by a due limitation of the power of running in debt. As to popular fallacies about money, labor, production, scarcity of money, etc., they can never be expected to give way, — certainly not until scientists themselves have given up their theory of the impossibility of overproduction, and their theory of money as having mercantile value in the character of a commodity, suitable if wanted for the retail, but entirely unnecessary for the wholesale transactions of commerce. When they fully understand and concede the truth of Adam Smith's law and its application to all bank loans, there will be a reform of our present monetary system, and not before. There is no country in the world where reform is more needed. Young as the country is, the labor question presents itself here in a more embarrassing form than elsewhere.

O. P. E. Does not this arise from causes paramount to that of money and bank loans?

N. S. B. I have already said that it does, and I think I have demonstrated the truth of my assertion. If you will follow up the vein of thought which your question implies, you will soon agree with me about money, bank loans, banking reserves, and production on credit. Bank loans are not the active cause: they are only the means by which the act-

ive cause works. The active cause lies in producers: laborers are the human instruments by which they work, and deposits and bank loans the means by which they and the laborers and their families are fed, clothed, and lodged while at work. Limit the human instruments sufficiently and you will have no overproduction: limit the means sufficiently and the result will be the same. You cannot, however, limit the instruments sufficiently. The increasing efficiency of hand labor by improvements in machinery and processes more than compensates for what you can effect in that direction. Still, everything which can be done in the way of educating labor, and inducing it to convert its surplus wages into capital in coöperative undertakings, will be beneficial. Every dollar thus invested helps towards making up a guaranty fund against the dangers of excessive production on credit, and in favor of steady wages, profits, and prices. When labor has converted wages into capital, it necessarily becomes conservative. It perceives the risks which capital is required to take, and it will not only be satisfied with quick sales and moderate profits, but its wants will demand them. Tyranny is more easily practiced by a majority in a democratic state than by a single despot possessed of imperial power. Communism is at work; and while the intelligence of native-born laborers ought to be sufficient to protect them against its absurdities, the conversion of business into a game of chance through our monetary system, and the consequent exaggerations of the natural inequalities of fortune by making so many bankrupt; the high cost of living which excessive production on credit is sure to bring with it; the exhaustion of capital by excessive taxation which is sure to follow it; the resulting general demoralization and, heretofore in the United States, extravagant grants to corporations, furnish some reasons for its appearance. The most effectual check of all would be a sound monetary system.

O. P. E. You think it necessary to convert us economists to a more scientific theory of money and production before there can be a reform in banking?

N. S. B. I have said so. If all the countries of the commercial world would combine and establish international mints, no profit could be made by exporting coin of one, and importing coin of another metal, as bullion; that it can be done now arises from the accident of national mints. You perceive, therefore, that the assertion of Adam Smith, of M. J. B. Say, of Mill, of yourself, and others, that what is given in exchange, where metallic money is used in purchases, is the quantity of metal contained in the coin paid, and not the units of money which the metal furnishes, is false. If there were none but international mints, and the decimal system adopted, the universal money unit being called dollar as now in the United States, an eagle of half the present weight would circulate freely with one of full weight, if such a coin were agreed upon: one would be worth as much as the other everywhere, while under national coinage it would be good only within the territory of the nation issuing it. It is not, therefore, the metal which pays, as you assert, but the unit; and it is for this reason that bank-notes can be and are used as money. They are in a full and perfect sense money. Such would be units of bank credit, and such would be units of mercantile notes and bills also, were they so used. If Sir Robert Peel and others, instead of limiting bank-notes by metal, nearly pound for pound, had limited all bank loans by a metallic reserve of twenty per cent., leaving the Bank of England as it was, and allowing it to issue as many notes as it might choose, subject to convertibility, the maintenance of such a reserve in all banks would have forced the Bank of England to keep at least as large a metallic reserve against its notes. Forced, however, is hardly a proper word. Such a reserve for Bank of England notes would have followed as the necessary result. A limitation of bank-notes undoubtedly is advantageous, and if applied to the national banks by consolidating their note reserves, and requiring them to keep a definite ratio of reserve, it would be an important step in the right direction; but a limitation of deposit loans by reserve would be a limitation of all bank loans, because it is an utter fallacy to assert that a bank deals in credit or

debt: it deals only in what is deposited. The reason why it is asserted, and generally believed, that banks do so deal, is because all units of money are abstract, and it is therefore true in a subjective sense. I use the word subjective for want of a better. I mean that by loans a bank necessarily runs in debt to depositors over and above immediate means of payment in full, taking securities in exchange for the money it uses. The debt expands by loans, and contracts by payment of loans. This expansion and contraction of debt is mistaken for what is sometimes called bank currency, in which banks are supposed to deal; contrary as it is to the fact, because it is only the *result* of their dealings. But because it is the result, I say that the theory may be said to be subjectively true. Assuming the theory, however, to be true in an active or causative sense (contrary to the real fact), it follows at once that deposit-loan banks are banks of issue whose debt is circulated by check, and Adam Smith's law at once applies to them.

O. P. E. Did not Smith say that if bankers were restrained from issuing notes below a certain sum, and subjected to the obligation of immediate and unconditional payment, their trade might, with safety to the public, be rendered, in all other respects, perfectly free?

N. S. B. He did; and I believe he is correct, because he refers only to banks of issue without the function of deposit, and his assertion would apply with still more force to notes made payable at commercial centres, especially when the government holds ample collateral security easily convertible. I have shown you why deposit-loan banks require something more. Were it not for the natural tendency to excess in production on credit when it has an opportunity of maintaining itself by loans, it would not only be true of all banks that convertibility alone is sufficient, but no reserve whatever would be necessary. Smith says that in his time failures among traders were scarcely one in a thousand. There is a vast change since his time in Scotland, although undoubtedly the Scotch system and Scotch habits are a great safeguard. When Sir Robert Peel was supporting his scheme

for making bank-notes vary as gold would in their place, he supposed gold coin to go into all equations of exchange as so much gold, and not as so many units of money. His principle of metallic variation was right, but he did not give it the right application. He was prevented from doing it by his theory of money, which was not in accordance with the facts I have demonstrated. He was misled, because his theory made him suppose that there is an essential difference between a loan in gold or bank-notes and a loan where neither notes nor gold seem to pass. He did not perceive, any more than O. P. E. does, that in point of true economical science the question in any case where money is loaned or used is not, What kind of money is it? but, What result will the money accomplish? He did not perceive that when a bank of deposit makes a loan, the resulting change in the condition of the bank is, that it either takes gold, silver, or bank-notes out of its reserve and hands the same to a producer to pay labor, or gives a credit to a producer to pay for raw material, or a merchant to buy goods; and that in consequence, before a commercial crisis, its loans, and therefore its debt due depositors over and above reserve, are made up chiefly of two items, wages and profits. The loans of a bank of issue, if there were no deposits whatever, would be represented by the same items, but, in point of volume, more in harmony with cash markets. The question is, therefore, not in the form of the money, but the men and the forces behind money: it is a question of wages and profits, all the way up from a very moderate and safe to a less moderate, and finally, a very expanded and dangerous volume, sufficient to bring on a crisis. What *essential* difference does it make, whether this expansion comes by banks of issue or of deposit-loan, or both? The real question is, whether the wages paid and profits declared on account of the production of those things which have not yet found cash buyers have caused such an expansion; and not what kind of money was used to bring it about, except only for the purpose of ascertaining the remedy. That remedy will never be understood fully as long as the bullion of a gold or silver

or other metallic unit of money is confounded with the unit itself.

O. P. E. If governments could by their acts depreciate the bullion of either gold or silver coin to the miner's loss except by demonetization, and you could demonstrate the existence of such a power, you might convert me, perhaps, to the unit theory; but the late fall in silver has arisen, as I think you have yourself admitted, from demonetizations only.

N. S. B. Let the unit theory stand or fall in your opinion by that test. Governments and banks, by the issue of convertible or inconvertible paper, and deposit-loan banks by loans, depreciate gold and silver coin, and premium, as I have demonstrated, is an accident. If the unit theory were not true this would be impossible. But you are not satisfied with this demonstration. You ask me to demonstrate that governments can by legislative acts, exclusive of demonetization, depreciate bullion. If they can, they can depreciate its value as a commodity in the shape of ingots; in other words, its barter relation to other bullion, or, in still other terms, make a half ounce worth an ounce; and of course such depreciation must be to the miner's loss. If governments can do this, it must be by increasing the number of money units already coined, and at the same time diminishing relatively the quantity of metal contained in them. There must be a limit to this power, if it exists, because if money valuation is by units, and not quantity of metal, an increase in the number of units cannot make more, nor a decrease in the number less money than before: it is only increase or decrease, and therefore redistribution of purchasing power to each unit. Suppose all nations, as before suggested, to close their national, and establish international mints, making a dollar the unit, and employing both metals — gold and silver — at the ratio of 15½ to 1 for coinage. Assume the existence of five thousand millions of gold, and a like amount of silver coin. The whole of the gold units, the whole of the silver units, or one half of each, can be doubled in number, and the total of all the units thus in-

creased from ten to fifteen thousand millions; and gold and silver in each case depreciated as bullion, to the miner's loss. In all the cases, the resulting depreciation would attach equally to gold and silver, and each unit of the series of ten thousand millions lose ultimately fifty per cent. of its value in exchange, because three units would be worth only as much as two were before. M. J. B. Say says that it is the quantity of silver in a five franc piece which is given in exchange; so say you and most economists. If that assertion is true, the dollar of full weight ought to be worth twice as much as the dollar of half weight. Here is a crucial test of the unit theory and the bullion theory. What would be the fact? One would be worth as much as the other, and those of light weight would be the more convenient of the two. But would the miner lose fifty per cent. in future wages? He certainly would, but for one compensating accident, and even with that he would lose more or less for a time. The cheapening of bullion by the increase of numbers in the series of units would increase the consumption of the metals, and counteract the falling tendency of bullion to a considerable extent, as I have heretofore pointed out in this debate. Were there national instead of international mints only, it might be profitable, in a national coinage of this kind, to export one half the units of heavy weight to sell as bullion abroad; but this would be the extent of the export, because after that the whole number of units would be the same as at first, and no more could be exported at a profit. No export of this kind, however, could take place under international coinage, and all the pieces would circulate in company. But although there would be no assignable limit to the number of units and the nominal depreciation which might arise from diminishing the quantity of metal contained in them from time to time, aside from the compensating accident mentioned, the precious metals have an advantage over any other materials and over all forms of debt, in furnishing the units. The metals are distributed everywhere, and every *possible* change in the total of units would be so slow that it would affect equally *all* ratios of valuation and *all* equations

of exchange between buyers and sellers, debtors and creditors. The English pound could be changed to a dollar so gradually as to harm nobody, and in like manner the American dollar could be changed gradually to the French franc. The sudden change in the ratio of money units to units of merchandise, by issues of bank and government inconvertible paper may injure creditors; the rapid rise in the ratio of money units to units of all merchandise, including what they produce themselves, as production on credit advances, and the rapid fall in the ratio as production on credit declines, bankrupt American producers and make even English production on credit very costly to the United States, because they always buy more English goods when production is advancing than when it is declining, but the distribution of metallic money throughout the world makes sudden changes in the total of metallic units impossible: there is little change in this direction, although, through the additional circulation given even to gold and silver by the aid of bank loans, rise and fall of prices occur. But even granting that sudden changes in the total of metallic units could take place by coinage, there would be a limit to its effects in respect to the miner. Should the international authorities recoin one half of all the money, their power to affect bullion values in the case supposed would not only cease from that moment, but every piece recoined would add to bullion values, and therefore to the miner's wages, until, all the pieces being recoined, bullion values would be restored to their former level, and unit values and bullion values would again exactly correspond.

O. P. E. How does your latter assertion follow from your premises?

N. S. B. Gold and silver, being by general consent or tacit agreement brought into use as commodities of universally exchangeable value, become units only in all equations of exchange: the quantity of metal fixed upon for the unit becomes important only for the purpose of determining the whole number of units which can be made out of the whole metallic material which can be obtained, while the unit it-

self is not employed as in the case of units of commodities intended for use, like wheat, iron, or diamonds, to determine the quantity of metal actually delivered as the result of such equations. Some particular unit of weight must, therefore, be adopted, — it is immaterial which one. The same number of units may be obtained by making all of a certain weight, or by making two thirds of them of a given weight and the remaining third of half that weight, or, still retaining the number (were it not for the labor and inconvenience), by making each of a different weight. The result will be the same in either case, whichever division is adopted in the first instance and adhered to; but if units of one weight are adopted at first and units of different weight temporarily adopted afterwards, as in the case supposed, bullion values will depreciate within the limits stated. If one third of all the units of each metal were, at the commencement of such an international coinage, made of a certain weight, and the remaining two thirds of double that weight, there would be the same number as if all the units were made equal in weight. Two units of twelve eighteenths of an ounce each for every one of six eighteenths would furnish the same number of units as if all were made of the weight of ten eighteenths of an ounce each. If the former system of one light for two heavy units were adopted for all time, waiving the increased danger of counterfeits of the light coin, the miner would suffer no loss, and the whole world would gain much both in wear of coin and in convenience, by depositing a considerable portion of the heavy coin in government or international vaults and circulating the light coin; but if that system were adopted after the international mints had coined and fully distributed units of equal weight, and maintained long enough to recoin the existing stock of metal, the miner, subject to the compensating incident before mentioned, would lose.

O. P. E. Your demonstration is perfect, I confess. The heavy and the light coins would circulate together, and if each were of different weight, the smallest coin would be very light, and possibly the light coins might, under special

circumstances, command a premium. But now that you have at last demonstrated the unit theory in such a manner that I am compelled to admit it, can you demonstrate to me as forcibly your theory of production on credit through bank loans?

N. S. B. Allow me first to conduct you to the conclusions which follow necessarily from the premise you have conceded. The conventional value of coin being in the unit and not in its bullion, you perceive why paper money has so largely come into use, and that the value of all money, metallic included, lies in the limitation of its units. The Continental money of the American Revolution and French assignats and mandats failed for want of limitation. The issues were so excessive that, redeemableness aside, they became wholly unfit for use and by common consent were abandoned. Such was the case with the issues of the agricultural banks of Michigan and most of the free banks of Indiana and Illinois. Such might be the case with gold and silver were it not for the limitation imposed by the material of which they are made. The number of their units may, as I have just shown, be temporarily increased to the loss of creditors and miners, but the compensating incident before mentioned stands as a check, and if it did not, the loss of profits and wages would check mining. You have here a demonstration also of the falsity of the theory that the cost of metal in mining measures its value in exchange. This theory puts effect for cause, and putting effects for causes is the chief reason why there has been no advance in monetary science. The loss in the case supposed comes to the miner from the fact that the unit value of the coin controls its bullion value: the compensation for the loss comes from the same source, because, while the increase in number of the units cheapens bullion for the miner, it creates at the same time a greater demand for it as ordinary commodity, for art and manufacturing purposes. The superiority of metallic over other money, whatever form it may be supposed to assume, — that of government and bank, mercantile or other notes and bills, or, if you choose, bank credits, — consists in

the steady limitation of the number of its units which the complex elements just stated furnish, with the additional fact that the mercantile theory of metallic money which arises from confounding, as you yourself have done until now, the unit and bullion (commodity) values together, helps to distribute it throughout the commercial world, and to retire it in presence of large issues of paper, as of late in France, in the United States in 1857, and to some extent in Adam Smith's time in Scotland, after the establishment of the Bank of Ayr. All money is in point of science the same, because, as money, it is but a unit or series of units localized, limited, and named. Hence it follows that if depositors pay out units of bank debt, standing to their credit in banks of deposit, as you claim, instead of money in the reserve, as I have asserted and proved, these units of debt are employed as money and are money, the same as the bank-notes and coin which the reserve contains. You may, if you choose, call units of checks and of bills of exchange money instead of the units of bank debt they transfer. If bills of exchange are to be treated as money, it must be because they are in effect drawn upon a bank or banker, through an intermediary.

O. P. E. In what way?

N. S. B. A. in Chicago draws upon B. in Buffalo or New York on account of a cargo of wheat. B. accepts and sells to C., who pays out of proceeds of sale to D., who borrows from a bank and pays by check. The principle is the same if B. resides in Liverpool. A. in effect draws upon a bank through the acceptor as an intermediary. By confounding the unit with its bullion you have made an unscientific distinction between metallic and other forms of money: the scientific distinction is the one I have given. It follows that if one of the customers of a bank makes a loan, and the proceeds are placed to his credit, and he pays by check which contracts bank debt without any money being actually taken out of the reserve, he has borrowed and paid money precisely as if he had taken metal out of the reserve, and the payee who received had not redeposited it. It is an utter fallacy to assert that a bank does not deal in money: it is a fallacy to as-

sert that it does not loan out of its reserve. It is false to assert that a bank deals in any form of bank debt save that of bank-notes : it is true that a bank owes more or less, precisely as it uses more or less of depositors' money, and it is true that the reserve is sufficient to supply as much circulation as could be supplied by the deposits, if paid out to and held by depositors in their own hands in the shape of bank-notes. Therefore, if we assume that a depositor puts units of bank debt outside of the reserve in circulation, or pays them out by the instrumentality of his check, or if we call the units of his check so many units loaned him by the bank, then a deposit-loan bank is a bank of issue, and its issues in this case consist of units of bank debt placed to his credit and put in circulation by his check, if no money is actually withdrawn from the reserve. If you choose to adhere to this theory, be it so : perhaps it will enable you at this time to understand more readily my demonstration. You must not fail, however, to bear in mind that logical precision demands that if you assume you must rigorously maintain the assumption (false in point of fact undoubtedly) that the deposit-loan bank is, in this case, in respect to this particular loan and all other like loans, to be considered as a bank which has issued units of debt placed to the credit of the account of the borrower, who thereby becomes so far a depositor, if you deny that his check is paid out of the reserve.

O. P. E. To assist you in making the statement of our side of the case as plain as possible, let me say, that we never admitted and never supposed that credits are actually issued like bank-notes. We say that banks and depositors bring their accounts together and set off one against the other without moving a single coin or note. Some are debited, some are credited, and most are probably both debited and credited at the same time, and the proper entries are made on clearing-house and bank books. These entries are a matter of bookkeeping, and hence we claim that we are fully justified in saying that a bank deals in credits, or perhaps more properly, debts and credits. I concede, however, as the result of your demonstration, that these debts and credits, the units

of which appear now to belong to A. and then to B., and to expand or contract as the case may be on the bank books, are, because they are used as such, units of money, as much so as the units of notes and gold in the reserve: they are the same because they perform the same office. It seems, therefore, to be unimportant, because a mere question of words, whether we say that the bank issues these units or not. Being money, I concede now that they ought to be in harmony of proportion with the money in the reserve. The only question between us is, whether deposits arise from the production or the sale of commodities.

N. S. B. It is important for more than one purpose. It is important, because all cash sales by bank debtors diminish bank debt, and all sales which are not for cash increase it. The question now relates to bank debt. That diminishes and the reserve increases by cash sales of merchandise, or, in other words, sales to or for consumers. Hence, if such sales were to proceed indefinitely without any counteracting cause, nothing would be left but the reserve, and banks would have a dollar in cash to show for every dollar of their debt. A sale of merchandise for money borrowed from a bank, on the contrary, increases bank debt by the amount of profits and charges, which are so much additional production. You and your friends have always, as you say, maintained that deposits arise from sales. That is a mistake. The sale of commodities for consumption, instead of creating, annihilates deposits by paying bank loans; for bank loans created all the bank debt there is over and above reserve. For every bank loan paid there is so much of bank debt paid, and therefore a like amount of deposits annihilated. Consumption, then, is the paramount cause which destroys deposits, and hence the production and not the sale of commodities creates them. The set-off which you speak of, therefore, takes place only when sales are made outside of consumers' markets, and the purchases create the same or more bank debt than they extinguish, but never diminish it. That sales of this character create deposits there is no doubt. They increase them, by all the profits and charges accruing, down to the last

buyer, but the profits and charges represent so much additional production. If it were otherwise, the enormous expansions of deposits in the United States and England, before referred to, would have shown merely speculative advances in the price of stocks of merchandise on hand requisite to supply consumers' markets, which is absurd and impossible. Between 1854 and 1857 deposits increased forty-two millions in the United States. If this had merely indicated a speculative advance in the average total of merchandise on hand, what caused the advance? A general advance without an increase of money in circulation is impossible, and if the total of commodities, or merchandise on hand to supply consumers' markets, did not, as you affirm, increase, then the consumption of commodities, which at least maintained itself at its former average, would have annihilated bank debt, and therefore deposits, precisely as it had done three years before; and the forty-two millions of deposits could never have been created, and any increase of deposits would have been slow and regular. It was not, therefore, a speculative, but a well-founded advance in the volume of deposits, for it arose from the actual creation of wealth: wages and profits made up the items of the forty-two millions, for the most part. Prices undoubtedly rose from putting in circulation from day to day a volume of money sufficient to pay those wages and profits, until the overproduction, which was in the end a cause more potent in bringing down than increasing circulation of money had been in raising and sustaining prices, brought on the crisis. It was this rise of prices which so long, and up to the crisis, had disguised the real fall. Deposits increased in this manner because loans were not regulated by metallic reserve, and bank-notes, which ought to have been returned for redemption, were, on the contrary, used as additional "means." Had the loans been partly employed in paying wages for the improvement of land, as in the case of the Bank of Ayr, instead of wages for the manufacture of such articles as iron and cloth, and the building of railroads, only, the result would have been less disastrous. Whether the wages of labor paid by bank loans result in manufactured

commodities for consumption, or capital in the shape of railroads, makes no difference, except in the duration of the resulting crisis. The true office of a metallic reserve is to make it impossible to pay wages, after a certain point in production is reached, any faster than the resulting product of wages can find cash buyers. If the product takes the shape of commodities, it must find consumers; if of capital, cash buyers, because it is productive. If your theory that deposits over and above reserve arise from sales of commodities, or in other words actual commerce, were true, then, indeed, you would be right in saying, as you do, that the reserve has no necessary relation to deposits in excess of itself; but you now must certainly perceive that this is a mistake.

O. P. E. You are right: your demonstration is perfect. I perceive now not only the necessity of a reserve, as I have always done, but I also perceive that its true office is, as you state, to limit loans, in order to limit production. No doubt with such a limitation more production would, on the average, take place than without it, and the principal reason why I with other American writers have been misled in relation to the proper office of a reserve is, that we have confounded the unit value of metallic money with the metal of which it is made. While we have denied the doctrine of Adam Smith and the British writers, that the cost in labor of mining the precious metals is the measure of their value, we have admitted the conclusion which follows from that theory, namely, that the quantity of bullion in a unit determines the unit's value, instead of the latter determining the former. Hence we have always maintained that as long as what we call bank credit is on a par with and convertible into gold, that alone is sufficient, forgetting that depreciation in all the money units which arises from borrowing and paying them to labor in the character of wages, faster than the products of labor will sell, as well as from actually increasing their total number, carries with it the metal of which the unit is made. In short, we have admitted conclusions not warranted by our premises. We have lacked logical precision, because, while virtually admitting the unit theory by denying that of Adam

Smith and other British writers, we have, by admitting that the value of money lies in its bullion, conceded the truth of that theory, and our reasoning upon the subject of money is but a tissue of contradictions, or, as you said in the beginning of this debate, in words which irritated me at the time, but of which I now see the force, chaos itself. Labor is not that which gives value. Men might toil indefinitely without creating any value if no one would exchange with them. Wants to be supplied are the foundation of exchanges, and labor is the source which supplies the things to be exchanged. Labor is a source of supply, and not a measure of value. Value is one half, or, in other words, one side of every simple equation of exchange, and where money is in use, units of money constitute one side and units of goods or capital the other side of the equation. Hence wants to be supplied, and surplus commodities which some holders possess and are willing to part with in order to supply those wants, determine in general the exchangeable value of the surplus commodities of other holders. There are no wants to be supplied by money, but only by what money buys, and therefore inasmuch as cost of mining does not determine the value of metallic material, quantity alone determines it without regard to any intrinsic qualities of the metal, and therefore with regard only to the number of units which can be made of it. The value of the metal is conventional and lies wholly in what it buys, and hence not in itself but in the units of money it furnishes. Real values have their origin in wants, and their limitation in the wants themselves and the means of supplying them. I perceive, therefore, that limitation is the essential quality which must be sought in money, in order to maintain steadiness in the units of the other side of the equation, whatever may be said, thought, or believed, to the contrary.

N. S. B. You are right. You now perceive clearly why convertibility is of itself insufficient. Convertibility is essential, but the object to be attained through it is limitation, and mere convertibility falls short of limitation. To have due limitation, your reserve must be in harmony with out-

standing circulation. I have explained fully why banks of issue, although not required to keep a fixed ratio of reserve, maintain this limitation; not perfectly, it is true, but with approximate sufficiency, as they did in Adam Smith's time: it cannot be done under the deposit-loan systems of Great Britain and the United States. Our banks cannot be regulated without a law and proper supervision, and perhaps they cannot be regulated at all. With banks of issue only, the maintenance of a proper reserve by a few banks inures to the benefit of the country at large, as well as to the banks which keep it, by maintaining steadiness of production and prices; but a bank of deposit loan, however well managed, and however large its reserve, is powerless in that regard: the limitation must be universal. The loans the managers of a few banks refuse to make will certainly be made by the managers of less conservative banks, and production on credit is sure to proceed until checked by a crisis. Such, undoubtedly, would be the case with banks of issue only so far as improvident loans are concerned, but loans of the latter class would be kept in check to a much greater extent by the necessity of continually purchasing coin to replenish reserve out of circulation at large. Metallic limitation would not be perfect, but it would be sufficient to bring commercial and industrial disturbances to much smaller proportions, and a consolidated reserve, maintained at average within short periods, would make the limitation perfect.

O. P. E. I have been thinking of some method of illustrating, in a forcible manner, this principle of metallic limitation. Coins of wood, or cheap metal, or greenback notes, made by private individuals, would answer the purposes of money, if they could be properly limited. If private individuals were allowed to issue such money as their share of "greenbacks," it would cease to have value because it would have in its material no limitation; but limit the issues by law by requiring every two dollars paid out to be accompanied by five dollars in gold, whether in or out of a reserve, the issue being made once for all per capita, and you would have a steady currency: make it merely convertible, and if

you could reach the issuers and they were all solvent and willing and able to pay in coin, you would have approximate but not perfect steadiness. Perfect steadiness can arise only from perfect limitation, and there could be in this case no perfect limitation of prices, and therefore no steadiness to the highest degree attainable, of wages, profits, interest, and taxes. I perceive now very clearly that our logic has been entirely at fault in respect to money. Money is but a process for the exchange of commodities and capital, and hence all kinds of money are in point of science alike. If C. B. C. and his friends, who insist that there is not money enough, and that the government ought to issue more, could obtain the privilege of issuing their own money before mentioned, it would do no harm in the end if it could be properly limited, and it is precisely the same with that of the government. The privilege would be useless to them, however, and they would never avail themselves of it.

C. B. C. My eyes have been opened as well as yours, Mr. O. P. E. I perceive that the unit theory overthrows the theory that mere convertibility is of itself sufficient without reference to surrounding conditions, and that the demonstrated steadiness (demonstrated in this debate) of a metallic currency does not exist without the presence and union of all the complex elements which have given rise to it. The demonstration that the production and not the mere sale of commodities gives rise to deposits is plain. I have been mistaken. I always insisted that there could be no overproduction: I perceive that I was correct in this opinion only when abstractly stated, and my error consisted in not practically converting it into the assertion that all production must, on the average, be in harmony.

S. L. I always took it for granted that all money is in substance the same, if it will enable one to buy. Upon the industrial question, C. B. C., I suppose, must be right. If there is really money in abundance, and the scarcity lies only in the circulation, I have nothing more to say. We must wait until manufacturers are ready to move, and that, I suppose, they will do as fast as they get orders.

O. S. B. I have carefully watched this debate. It has been in some particulars methodical, and in others desultory. I have been convinced for some time, but O. P. E. and C. B. C. have held out to the last. Probably the discussion has been more effectual than it would have been if more methodical. The opinions of economists must change as a rule before those of bankers and merchants can be expected to do so: I am an exception. I trust the debate will be reported, and published by itself, if too long to be made a part of the book about to be published by a friend of N. S. B.

N. S. B. It will probably be too long for that purpose, and therefore I shall advise that it be published separately. Perhaps a proper title would be this: "Monetary and Industrial Fallacies: A Dialogue."

O. S. B. The greatest danger (for N. S. B. and his friend) is that of being misunderstood. They do not contend, and none of us believe, that the bullion in a gold eagle is not conventionally very valuable as a unit of money to buy with: no man in his senses could suppose otherwise. What we affirm is, that a commodity is an article of merchandise which some people are ready to sell because they do not want it, and others are ready to buy because they do, to satisfy some real want; and the want which demands diamonds is as real as any, although not so pressing as others. A diamond is, therefore, as real a commodity as any other, but the value of all money is conventional, and because it is conventional it must lie in the unit which the bullion furnishes, instead of the bullion itself. I do not believe, nor does N. S. B., that there is any such thing as permanent overproduction, and in fact the use of the word is liable to grave objections, but we have no other to supply its place. We mean that absolute necessaries cannot be overproduced, no matter how much labor and capital may be employed for that purpose, nor how extensive and complete the implements of agricultural labor may become. On the other hand, we maintain that the necessaries of life, other than these, are from time to time being produced relatively in excess, and that to deny it is to

deny what every careful and competent observer must perceive, if the prejudice arising from the old theory, that there can be no overproduction, will allow him: so much for the evidence of facts. That such a result ought not only to be expected, but also with constantly increasing intensity, is shown by the fact that while there can be comparatively little economy in the consumption of absolute, there can be very great in that of relative necessaries, and that while there can be no overproduction of the absolute, the improvements in the implements of agricultural labor, and the still greater improvements in those of other labor and in manufacturing processes, are constantly diminishing the amount of hand labor required in all quarters of the grand field of production. The question arises, Is this advance a blessing or a curse? Is it progress or retrogression? We believe it to be a blessing and we believe it to be progress, because it is the liberation of labor through a constantly increasing control over natural forces, and the labor thus liberated can be set at other work; for instance, at making better, more substantial, and healthier houses, in drainage, in road-making, and in farming. National wealth is a question of condition, and if fewer hands are needed than before for manufacturing and farming, more can be spared in the United States to buy and improve farms of their own. The real question, then, is, how surplus labor, whether in the United States or in countries like Great Britain with which they trade (but Great Britain particularly), can be forced by emigration and other means to its proper place. There is one thing certain, that if there were no such thing as a banking crisis there would be no such thing as a commercial or industrial crisis, except, perhaps, in a very mitigated form. It is equally certain that banking crises arise from bank loans. It follows, therefore, that if bank loans could be and were regulated, there would be no banking, and, at the worst, but a mitigated form of commercial and industrial crises. It is equally certain that the volume of bank loans show an equal volume of production on credit, and that they raise prices as long as they are being made, and thus conceal, until a crisis, the heavy losses production on

credit, largely in excess of markets, always brings in the end. All this excess and the loss and demoralization which ensue arise from this concealment. Excess cannot be indefinitely continued, because it is impossible on the part of one half of all the producers, and hence it must, on the average, be impossible on the part of the other half. To regulate that part of production on credit which is carried on by bank loans is not to diminish, but, on the average, to increase it.

N. S. B. You are right: regulation would increase the total, and reduce the cost of living. The United States must supply home before they seek foreign markets, and to do this they must reduce the real expenses of living: I say real in contradistinction to nominal or money expenses. The cost of living is enormously increased by excessive production on credit: it is not a mere question of the volume of money. If C. B. C.'s "greenback" friends had the privilege of issuing their own money, as before suggested, it would amount to nothing in the absence of banks, because no more production could take place in consequence. The losses from excessive or ill-balanced production through bank-loans, when the reserve is kept merely at the convertible point, as it always hitherto has been, occur in this manner: As production on credit advances, loans and deposits increase and prices rise: the second million of products costs more than the first, and the third more than the second, not only in nominal, but real prices. It costs more in dollars, and it also costs more in absolute and all other necessaries consumed. While the production is going on, the increased cost of living is represented in an increase of dollars by loans: when the crisis in production is reached, and the prices of the manufactured goods fall, bank loans must be paid in money, and the difference between sales and cost of production reckoned in dollars is real loss. The result is the same, therefore, as it would be if all exchanges and loans were in barter and not in money, provided the manufacturers could borrow absolute and other necessaries to produce to the same extent they actually can with money: their losses would be of the same character. In point of fact, however, there would be no crisis

in that case, because loss by the excess and inability to hold it would be demonstrated at a much earlier period. The practical effect would be that more would, on the whole, be produced, and the cost of living would be much less. Removing the veil which money and bank loans cast over the whole process, this is really what we all have in view, in proposing a limitation of bank loans by reserve.

O. S. B. You learned the new theory of money and production which you have developed in this debate, Mr. N. S. B., from your friend, who is the author of the book you referred to. You are a practical man of business, and so am I. You converted me to your opinions at an early stage of this debate. The reason for this is probably my practical knowledge, and my comparative indifference to what are called theories. I know that crises come periodically, whether paper money is convertible or not, but having witnessed three of them in the United States, which are more particularly distinguished by epochs than any other events in monetary and industrial history, — I refer to those of 1837, 1857, and 1873, with others which have intervened, of a comparatively mild character, — I affirm that all experience and analogy show that there must be a common cause. Great numbers of men are seeking work and cannot obtain it, and millions are being paid out for wages and raw material whose resulting products will not pay cost, in order to keep labor employed; and because to set the labor employed adrift would disorganize it, and also cause waste of fixed capital. It is against common sense and reason to maintain that these are the necessary results of producing on credit, and that they are unavoidable: they are not unavoidable; they are accidental; and the accident is temporary excess. How does that excess arise? is the question. There is but one explanation which satisfies me, and that is the one established by this debate. I perceive that I was always right in maintaining that there could be no such thing as overproduction on the average, because there can be no excess in the absolute necessaries of life. The producers of these constitute at least half of all the producers in the world in point

of value, and if excess be possible on the part of other producers, as unquestionably it is, it cannot long be maintained. I am satisfied that a rectification of the latter by the former is the crisis which is now upon us, and a plain, practical proof of this fact can be obtained for us all by the answer to this question: If twenty-five per cent. of all the laborers in Great Britain, Germany, and the United States during the last ten years had been settled on the new lands of the United States, producing absolute necessaries of which there can be no surplus, and consuming relative necessaries of which there is a surplus, should we have suffered from the present crisis? Certainly not, because we would have decreased surplus by twenty-five per cent. and increased produce, which is relatively short, by a like amount. We should have produced the same result relatively as would now be produced by increasing to the amount of fifty per cent. the consumption of relative necessaries, which are in excess. That the United States are capable of taking the lead as producers in this line in due time, there is no room for doubt, unless their great productive powers are converted into a curse instead of a blessing by an unsteady currency. A science of money and production founded on absolute demonstration is what we need, and I think we have it in this debate. I perceive that my old opinions were in a certain sense (subjectively) true, and I can now furnish complete demonstration of the truth of the common opinion that metallic money is the only perfect money in the world, by proving, strange as it may sound, that the reason heretofore given for the fact is false, because it has been shown that even metallic money is not a commodity. Its perfection lies not in the metal, but in the almost mathematical accuracy of the limitation of the units of money which metal can furnish, in the limited annual supply of the metals, and the very small ratio furnished by dividing that supply by all the metal throughout the commercial world in the shape of coin. It is exactly for the reason that money is not and cannot be a commodity that this perfection exists. Perfection, as applied to money, means the most perfect limitation of the units possible. This perfection will

never be understood and can never be taught in an intelligible manner until it becomes a conceded fact that the value of metallic money lies not in the metal, but in the unit; not in the debt due by government or bank, but in the unit limited by the debt. Proportions of value between commodities in barter must be expressed in units, and the use of money, scientifically stated, cuts direct barter in two, and substitutes for it indirect barter with improvements, by giving those units a local habitation and a name, and making the action and reaction of mutual wants bring to every buyer the commodity he desires, when and where he would have it. The use of money may, therefore, be called a system of indirect barter, in point of results. With these explanations, scientists may safely teach, if they choose, that metallic is the only real, or, indeed, if they wish to put it so, the only money in the world.

But the unit theory is indispensable, if they undertake to explain the nature and object of metallic banking reserve. Because the perfection of metallic money consists only in the perfect limitation of the number of money units, and money, not being a commodity, can be used only to exchange commodities, the limitation ought to embrace, not only the actual number of units in existence, *but the use of them likewise*, in the character of wages in equations of exchange for labor by the aid of loans out of bank reserve, in excess of their use in equations of exchange for the products of labor, which return the units back to bank reserve. If the units are taken out of the reserve by buyers and paid to sellers, who put them back again the same day, very great economy of coin can be practiced, and the surplus used in loans. What becomes of limitation under such conditions? Convertibility continues, undoubtedly, and whatever may be the depreciation or loss in power of limitation, convertibility is believed to be sufficient, because and only because of the illusion created by the commodity theory. O. P. E. must now clearly perceive that he and other American economists, following as they do their great predecessor, M. J. B. Say, would be more logical if they would fall back upon the (British) theory of Smith and

Ricardo, — that the cost of the metal in labor is the measure of its value. If metal had never been placed in banking reserve for want of banks, that theory, as an effect and not a cause, might, although utterly false, be, without any damage, considered as substantially true, because aside from banking reserve the metallic unit comes nearer maintaining absolutely unvarying purchasing power or exchangeable value than any commodity can, as I have just now stated. To demonstrate the truth of the unit theory to a mathematical certainty, as has been done in this debate, is absolutely necessary, in order to establish the function of limitation as the true end and aim of the common sense of mankind in choosing and adhering to metallic money, although they are universally at fault when they attempt to give the reason.

O. P. E. Do we not put the proposition too strongly, in calling the certainty mathematical?

N. S. B. Not one whit. If all kinds and forms of money are expressed indifferently as units in all equations of exchange, they are units, because being conventional they can by *no possibility* be anything else. Hence, if all nations should give up the use of gold and silver, because some one had discovered a method of limiting paper money efficiently, and paper were adopted generally, these metals would sink to less than one quarter of their present value. Sound paper money duly limited would have as high value as the metal itself can have: the impossibility of limiting it constitutes its principal defect. Hence I say that with limitation duly and properly secured in the manner indicated, the use of bank-notes and checks may and ought to be extended as far as possible nationally, confining the actual use of the metal to international exchanges.

O. S. B. The most satisfactory application of the unit theory for me is to show by its means how production on credit becomes more costly in proportion to its increase over and above the demands of cash markets, and that the measure of its increase is the increase of deposits. The theory furnishes a satisfactory explanation of the reason why mere convertibility, which Adam Smith and all the British

and American writers, O. P. E. hitherto included, have always thought sufficient, is wholly inadequate without keeping it always at the point where limitation is added to convertibility.

N. S. B. It shows also that, logically, writers like O. P. E. and C. B. C., and bankers like you, Mr. O. S. B., in time past, and the people who clamor for more government paper money, are not far apart. The principal difference between you and O. P. E., on the one hand, and C. B. C. and the people referred to, on the other, is that you and O. P. E. have never carried your theories out in practice, but have always refused to do so. If credit is sufficient to produce merchandise and sell it at wholesale, it follows logically that it is good enough at retail. What right have you, in point of consistency, to find fault with paper money theorists, as you call them, like C. B. C. and his followers? If units of bank credit without gold are good, units of government credit are better, provided they can be used, if you are right in maintaining that overproduction is impossible, for government credit is undoubtedly stronger than any bank credit can be. You are therefore logically committed to the use of government paper, but common sense and the experience of mankind stand in your way; and why? Because the unit theory of money and the theory of overproduction are both true.

O. S. B. You are right, but let us hear your reasons briefly.

N. S. B. Of course government credit must be better than that of any bank: if not, why secure bank-notes with its debt as collateral security? But governments cannot turn bankers, for what does a banker *in effect* loan? Undoubtedly goods of all kinds, which producing consumers and their laborers require while at work, to feed, clothe, and shelter themselves. Suppose the United States were to issue one hundred millions of additional paper money and distribute it per capita: what possible effect could this have in the way of supporting production? C. B. C. has hitherto confounded reams of paper, duly signed and distributed, with goods and

chattels. Banks really lend the latter and are partners with those who borrow them by means of bank loans. While, however, the unit theory is essential in order to demonstrate the falsity of the old theory of O. P. E. (that banks deal in credits and that those credits are not money), the old theory of mercantile value in metallic money as bullion, which practically never will and never ought to be abandoned, is one of the most important elements of the function of limitation.

O. P. E. Limitation of what?

N. S. B. Of all other kinds of money. The late issue of inconvertible bank-notes by the Bank of France made the total of note issues about equal to all the silver and gold in France. Had all the metallic money in private hands circulated, or, in other words, had it been paid out and used as freely as the notes, prices certainly would have been very much expanded and advanced, but the metal retired into reserves and the paper circulated, as did the units of bank credit of the Bank of Amsterdam: the only *essential* difference was that in France there were millions of metallic reserves instead of one. The metal to the extent of its total limited the notes. There was no limitation in point of science, it is true, because the fact that the notes and the metal corresponded very nearly in volume was probably a coincidence. Had the issue of paper been carried much farther, probably its effect on prices would have been apparent. Upon the same principle, one hundred millions of gold were retired in the United States in 1857, and both gold and silver more or less, more than one hundred years ago in Scotland after the Bank of Ayr had begun to loan freely. What we all must endeavor to do henceforth is to place this function of limitation possessed by metallic money when in the hands of the people at large upon scientific grounds, by fixing some definite point for the economy of metallic banking reserve to stop. When that point, universally agreed upon or at least universally enforced, is reached, hoarded metal will make its appearance, and give us a scientific limitation to the use of all other forms of money, whether it con-

sist of bank-notes only, or notes and bills of exchange and checks, if we assume these to be the money used instead of the money in the reserve. We shall then have a universal limitation of all forms of money, and thereby of loans, and, as a result, of prices and of production on credit.

O. P. E. You are right. It is astonishing how differently this matter of production on credit appears to me since I have learned the true function of metallic money, or, as I might put it, the reason why that kind of money is the most perfect. In fact, I need not change my nomenclature in that respect. The most important, in fact I may say the only important attribute of money, being that of steady limitation of units, gold and silver, in view of the large accumulations of each, may well be considered as the only real money in the world when they are so distributed that their proper function of limitation is not interfered with. Proper distribution does not imply that the metal should not be in reserve, by any means, because it is in millions of reserves when it is distributed among millions of people, and if these reserves were all consolidated into one, and the money paid out by checks without ever actually leaving the grand reserve, the principle would be the same, because the checks would be limited by the metal standing to the credit of each owner: the units of checks would have a perfect limitation in the units of metal belonging to each depositor and constituting the grand reserve. The same rule would apply if the managers of the grand reserve should loan three quarters of it, but the principle of limitation demands that they stop their loans at some definite point; in short, that they limit the economy of metal. This, in my opinion, is the true science of money, because it is mathematically certain that the value of all money is conventional, and hence the value lies in the unit and not in the metal. With international mints coins might vary in weight if the principle of limitation were adhered to.

O. S. B. How well the theory helps to explain overproduction! Overproduction on the average being impossible, we have to deal only with temporary overproduction. The

annual production of wheat being nearly balanced by the annual consumption, bank loans to the buyers of wheat undoubtedly swell deposits at certain seasons when such loans are in demand, but instead of indefinitely increasing, they diminish, by payments through the exchanges of wheat for manufactured goods, the loans made to the producers of cloth, iron, etc. It was the constantly increasing excess of the domestic added to the foreign production of these goods which came to this market, over and above the production of such things as wheat, which between 1854 and 1857 swelled deposits forty-two millions under convertible but not duly limited bank-notes, and economy without limit of metallic reserve in commercial centres. The forty-two millions did not represent all the unbalanced production, because a large amount, which this increase of deposits taken by itself would not demonstrate, was rendered possible through savings of labor deposited in savings banks, and a large portion of the profits on production whose products had not yet found cash buyers must be added in order to perceive the vast accumulation. All things may be produced so as to create a want of harmony of production, except the absolute necessaries of life and the precious metals. It is impossible to have an excess of these. Mining for petroleum has become within the last few years a very important industry: it is as impossible, on the average, to have an overproduction of this mineral as of any other relative necessary, but unrestricted bank loans have done it great injury under our irredeemable money system, and will continue to do so even after redemption, without a due metallic limitation of bank loans, which of course we need not expect at present, if indeed it be ever possible. Tools and supplies being a very important part of the outlay in this business, a note given for the purchase of them can be readily discounted in bank, and the dealer can then purchase more tools and supplies. This is precisely the same thing as if the tool-makers had borrowed themselves, because the total amount of their production is the same in each case: it is immaterial who borrows the money which sustains production on credit,

whether it be the first producer who originates, or the second producer, who produces additional value by distributing, and the consequences in this case are temporary overproduction of mineral, increased cost of production both of mineral and tools, and consequent low prices of mineral. It is a matter of doubt, whether the producers of mineral have not paid out to labor for tools and work at mining more than producing capital has received in profits, and unlimited loans have helped to increase the loss. Probably labor at mining for the precious metals has cost more than the metals are worth, but because the metals are used as money and at the same time converted by labor into commodity, — the commodity use not being one of absolute necessity, like that of wheat, — their value, in the absence of all economy, or with a perfectly limited economy, would be uniform, subject to only one cause of variation, — the variation in the ratio of total commerce to total metal. Convertibility alone cannot furnish a perfect limitation to loans of bank-notes even in the absence of deposit loans: this is shown by the Bank of Ayr, and some other banks of Smith's time, although mere convertibility approximates in such cases to limitation. But convertibility stops far short of limitation where banks sometimes loan as banks of issue and sometimes as banks of deposit and discount. Limitation fails under the convertible system of the United States as it did in Great Britain prior to 1844. It fails in limiting bank-notes in the way of loans and volume; and it fails in respect to limiting the economy of metal in metallic banking reserve, for even in Great Britain since 1844 there has been no definite limit to economy. There being no limit to economy of metal in Great Britain, the only limit to production on credit by the aid of bank loans is the periodical crisis in production itself. The range of prices is not as high, perhaps, as it was before 1844, because the total circulation outside of bank reserve can never exceed the metal itself at any one time. To this extent metallic limitation avails in the way of setting bounds to the range of variation in prices but not to the ratio of variation. Before 1844 in Great Britain, and always in the United States, deposit loans made convertibility of bank-

notes — imperfect at best in itself without such loans — vastly more imperfect by standing in the way of their redemption in coin. Perfect metallic limitation of all loans would bring producers nearer to market. In short, it would not allow them to produce in excess of markets as they now do. The producers of the United States will be able to find markets abroad, after they have demonstrated their ability to supply their own. Until that time it is idle to talk of foreign markets, and it is equally idle to talk of controlling home markets without a steady currency duly limited by metal.

N. S. B. You are right: we are all now of one mind. We have learned what money is: we have learned what production on credit is, and the danger from loss through excess. We have also learned that production on credit is essential to the progress of nations, and that while natural inequalities of wealth are essential to this object, the extreme exaggeration of them by the use of money without any metallic limitation is in the end disastrous.

O. S. B. We are all of one opinion, as you say, Mr. N. S. B., but we can scarcely realize how difficult it will be to bring economists and bankers generally to the same opinion. They will agree with us after a time, I have no doubt, but it may be a long time. Even O. P. E. would hesitate about writing a new book admitting the errors of his first.

O. P. E. You are right, Mr. O. S. B., I am hardly prepared to do so yet, and still I admit the demonstration of those errors to be complete. The science of political economy ought to be the establishment, by the most perfect form of demonstration possible, of those general causes or forces which underlie all social movements in respect to the production, the distribution, and the consumption of the fruits of labor and capital, and the loss and gain of labor and capital while they furnish the fruits.

Statistics and other details are important in the way of proving or helping to prove, by way of induction, as it is sometimes called, the principles of the science. Cause and effect are but the order in which phenomena unfold

themselves. We are at fault in not going far enough with this kind of proof. Political economy is advanced only to that point where, like astronomy before the establishment of the Copernican system, it takes apparent for actual phenomena. This astronomy did in maintaining that the apparent movement of the heavenly bodies is a real one. To all appearance they move, and our language and our actions still indicate that the apparent is the real movement. It is so with money and commerce, and not only so, but we actually believe what our language imports. Demonstration by development, by mathematical proof, and by induction, shows beyond doubt that money of all kinds is conventional, and merely a process to aid in the production and distribution of wealth, and yet it is impossible to resist the illusion that the metal of a gold eagle, which is worth its weight in gold to exchange for money with bullion dealers for the purpose of being beaten into gold leaf, or manufactured into plate, watch cases, and jewelry, has not at the same time a mercantile value as money. Show by development to a degree of certainty which may be called moral, that barter implies comparison, and comparison unites to make it; that the next stage of it is a localization and limitation of the units as proved by the practice of savages, and that whatever form money may take in future stages, the principle must be the same; show by mathematical demonstration that a thing of universal and conventional value must necessarily in all equations of exchange between buyers and sellers, not only take but always maintain the character of abstract units of exchange, and that any commodity, — even wheat, — thus used, would necessarily, as money, take the same form; show by induction, through analysis, that the subject of money and its uses is one of the most complex, instead of the most simple, as generally supposed, and that demonstration by this process leads to the same conclusions, and still people will never stop speaking of money as having mercantile value and acting upon that idea.

C. B. C. Evidence by analysis and induction ought to

be the most satisfactory, because there can be no mistake about the facts.

N. S. B. I have given you that kind of proof in abundance. Of all complex subjects in social science, money is the most complex: if I may be allowed the expression, it fairly bristles with complexity, although it has always been called very simple. Men have worked with unconscious wisdom in adopting and adhering to gold and silver as the best possible form of money, and we have all acted with unconscious ignorance in supposing that under no circumstances can they lose it. The greater relative weight of silver and its consequent relative cheapness cause more of it to be consumed as a commodity than of gold, but the principal use being that of money, relative weights determine the values of gold and silver bullion, reckoned in each other. Intrinsic qualities are thrown out, just as they would be from wheat and rye, if and when used as money, because valuation must be by units, and there is no simple, certain way of obtaining units except by weight. If, in settling bullion values of gold and silver, reckoned in each other in the London market, the buyers and sellers had to stop and estimate the uses to which the two metals could be put, as commodities, as well as the relative weights of each thrown and likely to be thrown upon the market, they could never be used as money: all relations but those of weight, out of which to make units, must be eliminated from the equations of exchange between bullion buyers and bullion sellers, if the metals are to be used as universal equivalents in exchange. Monetizations, demonetizations, and remonetizations throw for a time more or less of either metal in excess of the usual quantity upon the market. Standard is imaginary, and hence there is neither double nor single standard; for a unit cannot be a standard. International mints, if there were no national ones, could fix the barter or bullion rates between silver and gold steadily at any point short of that which would carry all of either metal mined into use as commodity, and they could, as I have shown, make every coin different from another in weight, as long as they maintained the same

number of units. Units of bank and government debt, if convertible (and sometimes even when inconvertible), are worth their face in metal even after expanding the circulation, or multiplying the number of all money units, although they have actually depreciated the exchangeable value of all the gold and silver in the world as money, and therefore as commodity. The evidence to this effect is overwhelming and conclusive. Premium on metallic money, reckoned in inconvertible money, is therefore but an accident; were it otherwise, metallic money would never depreciate with paper, but would always command a premium when paper falls in value. If the unit theory is not true, or if we assume it to be false, the only alternative is that labor is the measure of metallic values, as Adam Smith said. The falsity of that theory has been demonstrated, and hence the unit theory must be true. It requires a number of complex elements working together to produce that standard steadiness in the number of metallic units in circulation, as compared with those of commodities, which gold and silver, distributed by commerce throughout the world, furnish: that science is but chaos which calls them merchandise when and so long as they are used as money: it is nothing but the old mercantile theory itself. While economical science pretends to reject this theory, and at the same time retains it by asserting that gold and silver go into equations of exchange between buyers and sellers as so much metal, and therefore as commodity, the theory itself, strange as it may seem, carried out practically and acted upon (we all act and talk as if we supposed the sun to revolve daily around the earth), is one of the most important of all the complex elements in maintaining steadiness. Gold and silver coin will not circulate when paper will answer the purpose, any more than bullion or plate. When they circulate we may be sure there is no other money to be used, and the truth and force of Adam Smith's law, that paper money ought not to exceed in volume the retiring metal whose place it takes, are thus illustrated by the very theory whose absurdities he attacked. The theory itself is really useful, although, like a man of

straw soundly cudgeled from time to time by the economists when they suppose they are showing the folly of hoarding, and embraced when they declare money to be a commodity.

The conventional character of money is shown plainly enough in our financial history by the people of the State of California, who by general consent adhered to gold and silver, while in other parts of the United States paper was used exclusively.

"Bimetalism" and international coinage follow the unit theory as logical inferences from the premises. The monetary propriety and (almost) necessity of refraining from the national coinage of silver for the present follow, also. The necessity of limiting the use (in other words, economy) even of gold and silver, when their even distribution to every producer, laborer, buyer, and seller through international as well as national commerce (one of the most important of all the complex elements of steadiness) is interfered with by equations of exchange, where units of labor or labor and raw material constitute one side, and units of money the other side, follows in like manner, in order to maintain steady prices and prevent the disorganization of labor and the bankruptcy of capital, which, under the name of industrial, banking, and commercial crisis, follow an excess of production on credit. It is impossible to demonstrate clearly how these effects follow even the loan of metallic money, without demonstrating in the first place that all money is essentially alike, and then showing the complex elements which give it steady value on the one hand and take it away on the other.

O. P. E. You are right in placing the unit theory in plain contrast with that of Adam Smith and Ricardo. They assumed (of course they never proved) labor to be a measure of value, and Smith applied the theory particularly to the labor of mining for the precious metals. Other British writers seem to leave it in doubt whether they adopt the theory or not, but although there is an almost entire want of logical precision in this respect, they, and all other

writers who affirm money to be a commodity, and therefore possessed of mercantile value, virtually admit it, and most of them seem to take it for granted that the premium in favor of metallic over inconvertible paper money, when it exists, is a measure of the depreciation of the paper below the metal in purchasing power. They say the metallic cost labor; the paper money, comparatively speaking, did not: the first, therefore, has, and the second has not, real, or, as it is sometimes called, intrinsic value. There are few, if any, economists in the United States who would affirm to-day that labor is the measure of value of its product, even if the product be one of the precious metals. Nevertheless, that theory is true in a subjective, although not in an objective or causative sense. The mistake of Smith and Ricardo was in giving it the latter meaning. The action and reaction of human wants and the means of supplying them tend all the time to equality of compensation for labor of the same grade of skill, and in this sense only is labor a measure of value.

N. S. B. That is true as a general proposition, but the sagacity of Smith was not at fault (however it might be with his logic) in supposing gold and silver to fluctuate in value less than any other products of labor. The true reason is, that metallic and all other units of money are not commodities and possess no mercantile value: they are the standard and tangible units by which all commodities are not only valued, but indirectly exchanged. Not one seller in ten thousand knows the quantity of metal in the money he receives, nor would he ever be likely to inquire, unless compelled, in the absence of government coinage, to weigh it; but the buyer is bound to ascertain the pounds or yards of the commodities he buys, because it is necessary for him to know whether he is getting his money's worth. One side of every equation of exchange between buyers and sellers is composed of abstract units, the other side of commodities or capital, which are not abstract. If both sides of the equation were abstract, there could be no trade and no production; if neither side were abstract, we should be without indirect barter and

civilization, and have direct barter and barbarism. I desire to impress upon you, as my coadjutor in laying the foundation of true monetary and industrial science, the reason why gold and silver vary so little. If there were no money in the world but gold and silver, distributed everywhere by commerce, and no "economy" of metal, there would be little variation in their average purchasing power. Wheat is wanted for consumption: there may be a difference of ten, fifteen, or twenty per cent. between one year's product and that of the next, and even with such a metallic currency there would be more or less resulting variation in the production of relative necessaries on credit, by the aid of loans. Under all circumstances there must be more or less variation, from year to year, in the production of absolute necessaries; but taking all commerce and all production throughout the world, the annual totals, being very large, vary but little, and the totals of gold and silver vary even less. A falling off of production and commerce in one country carries the relative excess of gold and silver thus arising to others. Smith, adhering to the commodity theory, gives only the latter reason for the steadiness of their purchasing power. The subject of money is thus seen to be exceedingly complex instead of simple, although the object sought (unconsciously, perhaps) is localization, distribution, and limitation of the abstract units of money in harmony with the units of commodities consumed, as well as produced, which are not abstract. This almost perfect uniformity in the purchasing power or value of the precious metals in exchange, as compared with that of any particular commodity, probably induced Smith to make the exception in their favor. As to their cost in labor being a measure of their value, or that of any other product, it is absolutely impossible. To measure anything whatever requires standard measuring units, suitable to the purpose; it may be a unit either abstract or not abstract, according to circumstances, but it must have some relation, and all the relation possible, to that which it measures. If it is a fixed unit of length or weight, it is not abstract, and cannot be, if it measures things intended for use

to ascertain quantities, but if it is designed to measure all commodities, whether sold by weight, surface, or cubical contents, the measuring units must necessarily be abstract, for no units, even of a commodity, can have any but an abstract relation as mere units of number to the units of all other commodities. In other words, the relation of any one commodity to *all* is necessarily an abstract one. Such is the relation of the units of metallic as well as paper money to all the commodities and capital in the world, and both commodities and capital in the hands of the manufacturer, the merchant, the farmer, the stockholder, and all others, are expressed in abstract unit dollars, pounds, etc. Such are the very complex elements which produce, by their conjoint operation, the simple result of making metallic money the least variable of all things which have value. How can any relations of value between all labor and all labor's products be stated? It is absolutely impossible. The relation could only be stated, if at all, in abstract units, and the units would be required to appear in all equations of exchange between buyers and sellers. Nothing of this kind has ever taken place, and nothing of the kind is conceivable. Units of labor may be bartered for units of commodities, or sold for units of money, undoubtedly, but as a universal equivalent they could never furnish abstract units, localized in any form. Commerce, internationally and nationally, is the indirect exchange of commodities through the agency of money, as a measure of their relative values. The comparison between the commodities and the fixing of their relations must be by units, and the units must be limited, because the commodities are limited. This is all easy enough so far as the exchanges of commodities for actual consumption are concerned: such exchanges are necessarily harmonious, because they balance each other: excess and want of harmony come through the exchanges of units of money for units of labor, which antedate and precede the exchanges of commodities. It is to bring the former within comparatively short instead of long periods, in harmony with the latter, that I propose, if practicable, metallic limitation, at some

definite point, of the loans which supply the labor exchanges with units of money. Under the form of money which the banks do not own, they indirectly loan to producers and laborers all that they consume, while creating excess, — the producers taking the first risk of the excess going without loss into equations of exchange of the commodity kind. The rectification of the joint mistake of labor and capital in creating this excess constitutes a commercial, banking, and industrial crisis. When political economy can be established on a few leading demonstrations of this kind, it will at least be intelligible. The labor which produced all the gold and silver in the world reckoned in average money value of day labor, in waste of muscular time, or necessaries consumed, is probably greater than the gold and silver are worth, reckoned in the same medium. The same may be said of many other minerals — petroleum, for instance — and of a considerable portion of all the articles largely overproduced by the aid of loans. All the products of labor add to wealth: if they sell for too much, the seller has the difference; if for too little, the buyer, wherever they may be found; and so far as domestic commerce is concerned, the difference is all retained at home. But the enormous waste, of both capital and labor, implied in these cases, cannot be understood, or even guessed at, without constructing an equation, mentally at least, for a fixed period, — say fifty years, — and taking into account all the mineral, all the timber, all the building, and other raw material wasted, and all the labor misapplied. The general statement of the equation must be: Results of all the labor and capital actually expended without harmony within fifty years, *plus* an unknown loss, which may be represented by x, equal the results which might have been produced with harmony of production within the same period. It is a costly business to produce in excess of markets: it forces producers to live on capital: many are now doing so, both in England and in the United States.

O. S. B. Inasmuch as every purchase of labor or commodities constitutes a simple equation of exchange between buyer and seller, I perceive very clearly how absurd it is to

talk about set-offs of credit after the truth of the unit theory of money is admitted, and how much more absurd, if possible, it is to compare what is called bank with mercantile credit. "Bank credit" puts money in circulation to pay labor for the most part, and keeps it in circulation until labor's products are sold, or their sale is checked by a commercial crisis; mercantile credit puts no money in circulation at all, but on the other hand economizes its circulation by allowing buyers to hold or consume without ready money; the only possible result being a rise of the particular article sold. This may be carried so far as to check consumption and bring on a commercial crisis in that particular article, but this is a totally different affair from a general crisis. The mistake we have made in confounding bank credit, as we used to call it, and mercantile credit, arose from a prior mistake we had made in supposing deposits to arise from sales. Mercantile debt, in the shape of notes and bills, is given in exchange for bank debt deposited to the credit of the borrower. To the extent of this debt standing thus to his credit he may pay out of the reserve, to sellers, units of money for merchandise or labor. Here is a perfect equation of exchange between buyer and seller, and there is no purchase of merchandise on credit. But why is it said to be like it, when it is in reality its direct opposite? It must be because in the chaos which writers and bankers make out of this exceedingly complex subject of money, rendered vastly more complex by banking, they fail to perceive the necessarily abstract nature of all money units, because they forget that there is in all such cases an equation of exchange between buyer and seller, and because so far as such purchases take place without actual sales for cash to consumers occurring shortly afterwards, and where there are no profits and charges to swell the cost, there is an exact and perfect set-off between mercantile debt due banks and bank debt due depositors, following as the *result* of the sale. But this set-off ends in no diminution of mercantile debt due banks, or bank debt due depositors, while mercantile set-offs extinguish debt on both sides. If a manufacturer owes a bank ten

thousand dollars for money loaned to pay labor whose products can find no cash buyers, or, in other words, consumers, the bank owes depositors a like sum by reason of the loan, and will continue to owe it until a cash market is found; for suppose a merchant to make a loan of ten thousand dollars in the same bank in order to buy the goods: he increases mercantile debt to the bank ten thousand dollars by so doing, and the bank increases debt due depositors by a like amount. But the *result* of this purchase in respect to bank and mercantile debt is that the buyer gives the seller a check to the amount of deposits thus created by his loan, and the seller hands it to the bank and takes up his debt by bill or note, thus extinguishing mercantile debt by that amount, while the bank, by charging the bank account of the drawer, extinguishes to a like amount bank debt due depositors, or in other words deposits. Now it may be said in this case that bank debt due the merchant through the new loan is by the instrumentality of his check set off against mercantile debt due the bank by the manufacturer, dollar for dollar. That is undoubtedly the *effect* of the transaction, but there is no increase of deposits, and there can be none except through the actual advance of production faster than consumption, and the increased cost of all production on credit reckoned in prices in consequence. This increase of cost puts more money in circulation, and while raising for a time the cost of the overproduced articles to consumers, raises the prices of what the consumers have to sell also, until a crisis in the production arrives. Until the crisis, or at least a comparatively short period in advance of it, the last million of all goods produced raises to consumers the price of the million which preceded it, as well as the prices of what consumers have to give in exchange. Overproduction is very costly, and these are the elements of disturbance it furnishes, until forces paramount to all abstract units of money bring about a reaction. Hence a producer's market leaves deposits exactly where they were, except so far as production is gaining: in order to have an exact set-off as the result of bank loans and checks, production and

consumption must balance. If production increases, bank debt or deposits increase; if consumption increases, bank debt or deposits diminish. The reserve is the money of commerce: as true commerce or the actual exchange of commodities, in other words, indirect barter, increases, the reserve increases, while, as production on credit increases, the money of commerce diminishes. The reserve then supplies all loans out of the money of commerce. To limit loans, therefore, as we propose, is simply to limit at some point the use of the money of commerce in the way of loans in excess of that commerce. Such loans are desirable for nations of great productive energy, but it is essential to limit them, and I now understand fully what limitation means: it means a limitation of the power of one half of all producers to produce (beyond a certain point) by the power to produce, and therefore to consume, of the other half, in order to maintain harmony of production as well as consumption. To these conclusions I have come, step by step, since I first perceived the fact that all units of money must necessarily be abstract in relation to human wants and the means of supplying them; and I have verified my perception by development, direct demonstration, and induction. By means of localized and limited units called money, the relations between these wants and means are measured for the purposes of social life. This is the most abstract form in which the use or circulation of money can be stated, and therefore it is the most complete and perfect. Reduced to a more practical form, it may be stated in equations of exchange between buyers and sellers: —

10 units (bushels) of wheat = 10 units (dollars).
10 units (dollars) = 10 units (yards) of cloth.

The abstract units of money in the first equation are on the buyer's and consumer's side, and the units of commodities on the seller's and producer's side. The case is precisely the same with the second equation, except that buyers and sellers change sides. The seller in the first becomes the buyer in the next, and the seller of cloth in the last equa-

tion will become a buyer of some other commodity in the next. The result is, that by eliminating dollars from each equation we have 10 units (bushels) of wheat = 10 units (yards) of cloth, and the cloth and wheat are indirectly bartered for each other by means of abstract units localized and limited, and called money. If we call the money a commodity possessed of mercantile value, we have double barter, undoubtedly, instead of single barter of the cloth and wheat, but it is utterly absurd to call it so, because if it is double barter, a comparison and a computation must be made by both buyer and seller of the uses to which the money, in its character of commodity, can be put after it is exchanged, which is impossible. It is not therefore direct, but it may well be called indirect barter, because barter is direct as well as complete exchange, but here we have complete although not direct exchange effected by the intervention on most occasions of an entirely new seller in the second equation, and the exchange thus becomes indirect. If the pieces of money were not abstract, in other words, general, or, in still other words, units, this indirect exchange would be impossible, and we should have only the barter of savages. To insist that we still have barter is to insist upon the truth of what the economists call the old mercantile theory of money. This theory is good in its place, but very mischievous out of place. It is good so long as people treat metallic money as a thing of value, like plate, when they have paper money on hand: it is pernicious when it leads bankers and economists to believe that a bank deals in "credits," in contradistinction to money; that the reserve has no relation to credits, and that they arise only from the sale of commodities.

N. S. B. How soundly you reason when you have a sound theory to reason from. Demonstration by equations is very satisfactory, but you must carry it one step farther, or, in other words, you must state the terms of three other equations before it is perfect. Were there no other equations of exchange between buyers and sellers but those you have stated, banks would need no metallic reserve; a re-

serve of bank-notes not convertible into metal would be sufficient, as I have already shown. It is precisely because O. P. E.'s old theory, that there can be no overproduction, even relatively, is false, that not only convertibility, but convertibility carried to and kept at a point where it is also limitation, is essential. Gold and silver are metals, and as metals undoubtedly commodities ; but because their chief use is to furnish units of money, the laws of ordinary commodities do not apply to them, and, as I have said, there is but little variation in their total as compared with that of all other commodities. Hence, because variations in the total of the units of all commodities are small, compared with that of any one commodity, the units of gold and silver must necessarily vary less than those of any other one commodity. But if paper units only, in the form of bank-notes, were put in equations of exchange like those you have stated, how could prices be other than steady? The circulation of money consists in putting it into equations of exchange between buyers and sellers, and making deliveries accordingly: putting it in circulation by a buyer is taking it out of circulation by a seller; the first is expansion, the second is contraction of circulation. One of these balances the other, and it is difficult to see how prices could be otherwise than steady, even if the conventional units, called money, instead of appearing in the form of metal, appeared in that of bank-notes, issued by sound banks to merchants, so long as units of money were placed in these equations only. Disorder comes when the units are placed by means of bank loans in equations of this kind: 10 units (dollars) = 10 units (of days' work). The expansion of circulation through the buyer of the labor is balanced by no contraction of circulation on the part of the seller of the labor, until the product of the labor goes into an equation of the first kind, and so passes to a consumer or cash buyer. When it does so, and not before, is there a contraction of circulation to balance expansion, by a return to the bank of the money loaned. But whether it ever goes into such an equation or not, labor must live, and it expends enough for that purpose

and retires, it may be, the surplus into savings banks. It is this which expands the circulation without contracting it on the part of labor, and the surplus of wages helps to repeat the process. There is one more equation which produces the same result. The preceding equation is labor's statement, but here is the equation stated by producing capital: 10 units (wages) + 2 units (profits) = 12 units (dollars created by sale of labor's product). The units of profit appear in deposits, and, in company with units of wages in the character of dollars, swell the total of money as compared with the total of commodities actually consumed; and hence prices. Metallic money now becomes indispensable, because, under the conditions previously mentioned, money in general may be called a conventional commodity, whose units would never increase in excess of the units of commodities consumed, if all loans were made by carefully managed banks like those of Scotland, even without carrying convertibility to the point of limitation; but under actually existing conditions, limitation is indispensable. The units of wages paid in bank-notes thus reappear in deposits, together with the cost of raw material and profits on all sales made to buyers, who buy with bank loans, and swell the volume of deposits in the shape of bank debt in excess of reserve, after the reserve has already been drawn upon to pay the wages of labor. There is a double expansion here: first, of the reserve through a loan to pay wages before the product exists, and secondly, a loan which increases bank debt to enable a merchant to buy the product as soon as it appears, — the elements of the loan being the same wages and raw material with profits added, — and deposits are thus increased by wages + profits.

In respect to wages and commodities bought with wages, the equation of purchase stated in terms is this: 16 units (wages in dollars) = 16 units of commodities consumed by labor in exchange for wages. Labor here gives rise to no second equation by buying a commodity like cloth, in place of a commodity like wheat, previously sold, as in two of the preceding equations: it has, therefore, consumed without exchanging commodities, or, what is the same thing, causing

them to be exchanged, and such will continue to be the case until its products are sold. It has stated only the first equation of indirect barter, and until its products are sold it cannot state the second. The blocking of the exchanges, then, is not an affair of money, but of indirect (not direct) barter, half performed. What makes a "tight" money market is the blocking of the exchanges of commodities with the unsold products of labor: on the other hand, an easy money market is a free exchange of the products of labor. Again, high prices mean that labor is making more of the equations which constitute the first act of indirect barter with its wages than buyers and sellers are making of the second, and that capital is doing the same with its profits. Low prices mean, not that money is any plentier, but that the balance of debt due by equations of the first to those of the second kind is being made up by an increase of the latter over the former. Steady prices, therefore, must arise, not from the movements of money, but from the balancing of the first equations by the second, in other words, an even and harmonious exchange of labor's products. The movements of the producing and commercial world are thus mirrored in bank loans, deposit debt, and reserve. From the most practical view of banking, production, and commerce which it is possible to take in a general sense, any distinction between the units which merely measure, — for they certainly do not control the production and exchange of commodities, — founded upon what we now perceive to be only a cobweb distinction between units of debts and of mere "rights of action" on the one hand, and units of gold and silver, except so far as one or the other best maintains equality between the two equations, and consequently steady prices, wages, profits, and taxes, has no just foundation in science. A deposit bank like that of Amsterdam, and a bank of deposit and discount, having a fixed limitation to its economy of metal, need never move a dollar out of its reserve so far as this question is concerned, because limitation is the object sought by science. If the metal never saw the light, or if it were entirely lost, the result would be the same as long as the limitation continued

the same in the absence of the metal as with it. The principle is the same with all money reserves, whether they belong to individuals or banks: limitation is the end really sought, no matter what may be said, thought, or believed upon the subject. The belief that metallic money has a mercantile value is useful only so far as it aids that kind of money in its function of limiting all other kinds. This is the kind of political economy O. P. E. must now teach. He must no longer teach that the object of convertibility is to enable one to exchange something which has not real value, for something which has; a mere paper dollar, which is *not a thing*, but only a "chose in action," or promise, for a real dollar, or *thing* which may be called a commodity. A "paper money theorist," as C. B. C. has been hitherto (but is not now), can never be convinced by such arguments. Men act upon the mercantile idea instinctively when they hoard gold or pay out paper in preference, but such arguments can never convert them.

O. P. E. The unit, in opposition to the commodity or mercantile theory of money, which I have now adopted, makes all your illustrations by equations comparatively plain. So long as I regarded money as anything more than valuing and paying units, and possessed of real as well as conventional value at the same time (which is a contradiction in terms), I confounded the auxiliary with the real exchange, and therefore consistently called an exchange of a gold eagle for ten bushels of wheat, or ten yards of cloth, barter; whereas, barter is a direct exchange of commodities between savages, or the first settlers in our "backwoods." Mankind never came out of barbarism into civilization in a day, as Minerva is fabled to have sprung, ready-armed, from the brain of Jupiter; slow progress upward, and not instantaneous perfection, is the rule. Barter requires comparison between the things bartered, in respect to wants to be supplied, and the comparison is made by valuing each in the other; the surplus of one producer supplying the wants of another. This comparison must have been made in units, because it could be made in no other way, and it gave rise in the second stage

of development to a localization of the unit in shells and wampum. Labor of some kind was undoubtedly essential to find the shells or make the wampum, but it was only means to an end, and not the end itself, because the end was and always will be limitation, now attained in the most perfect manner possible by gold and silver except when they are banked, and limitation is thus reduced to mere convertibility. If we look only at the end sought, it is correct to say that direct barter, which is bringing two commodities together to make an exchange, has developed into indirect barter through the contrivance of localizing and limiting the abstract units; thus dividing direct barter into two parts, and so making it indirect.

The surplus of one man supplies the wants of another by mutual action and reaction between the wants of all buyers, every purchase being at the same time a sale. In this indirect exchange, so long as it is confined to commodities, all must be sellers before they can be buyers. The units, being abstract in the beginning, must continue so under all circumstances. Whether wheat, or gold and silver, be the material to furnish them, they are valuable only because they are used to make the exchanges. Were gold and silver to go out of use for that purpose, they would sink to less than twenty-five per cent. of their present value. That they will never be abandoned is exceedingly probable, not because they cost labor, but because in the most important function of money — that of limitation and consequent steadiness — they cannot be surpassed. All the "movements" of gold and silver bullion and money are now plain to me. Heretofore I have sometimes supposed that silver had fallen, and sometimes that gold had risen. I now perceive that both of these propositions are fallacies, because they only contain one half of the truth. I now perceive that one must necessarily have risen if the other has fallen; and precisely to the same extent. Should silver gradually go out of use under the delusion that none but a "single standard" can be maintained, and no longer be retained even for "subsidiary" purposes, every fall in silver must be at-

tended by an equal rise in gold until silver goes out of use entirely; and the same may be said of gold. Both metals, until they go out of use, will continue to be precious, because they furnish precious units of purchasing power receivable for everything on sale. I perceive, now, that although gold and silver are exchanged for money to be manufactured into plate, watch cases, foil, and jewelry, they are exchanged by a very different rule from that applied to other commodities. It is their unit value which determines their bullion value. Were they to be used no longer as money, they would no longer be exchanged in that way, but like platinum or iron. With international mints, or national mints internationally regulated, it is clear to me that my friends would give up standard as a thing of the past, because it would no longer be possible to export money units for recoinage at a profit. Whither could they be exported, should the barter rates of gold and silver be made as 1 to 20? It would not be reasonable to fix them in this manner, because their natural proportion would probably be about 1 to 15, if each were equally in use.

But, whatever the proportion might be, it would be steady, because, money being entirely conventional, the commercial world, the author of the convention, can limit and regulate it short of the demand for commodity use. I perceive that if two commodities be chosen indifferently, to manufacture by coining, or even to weigh out at every purchase units of valuation and payment, purchasing power must be divided exactly between them, naturally and necessarily; and that precisely as one goes out of use, it must lose and the other must gain in value; and I have just now applied this principle to silver and gold. I perceive now the absurdity of supposing that gold or silver is likely to become too plenty, and I perceive as clearly the importance in the future of making both silver and gold the money of the commercial world, because if you double the total number of money units, as you would by adding five thousand millions (dollars) of silver to a like number of gold, the compound ratio of annual production to total combined mass would be steadier than that of a single ratio to single mass.

I perceive, also, why both metals have remained so steady in the absence of demonetizations. When the product of gold was for a period three times as great as that of silver, or that of silver three times as great as that of gold, if their principal use had not been that of furnishing money units, there could not have been such large masses accumulated, and there would have been great variations of price, as happens in other commodities, but the difference in price has never exceeded the difference between the respective ratios of product to mass, which rarely exceeded one per cent. as against a variation in product of three hundred per cent. But even this variation of one per cent. in ratio was speedily adjusted, and, under general and equal use of both metals as money, would be adjusted immediately, if indeed it could be said ever to exist at all. Should silver fall one per cent., gold would rise one per cent., and adjustment of ratio would immediately follow by coining one half of one per cent. more silver, because the cheapest material to make money units, and coining one half of one per cent. less gold, because the dearest. The constant vibration of the ratio, so to speak, between gold and silver would keep equal numbers of gold and silver units in existence, and hence approximately equal quantities of each in plate and other manufactured commodities, for, if from two equal masses equal parts be taken, the remainders must be equal. This is not absolutely, but approximately true.

N. S. B. Your arguments are stronger than mine or those of my friend. Let us close the debate with a statement of general results, and a comparison of our industrial condition and that of England. The equation of money in the shape of wages given and paid out in exchange for commodities to support labor; that of bank dividends and profits arising from sales outside of a consumer's market paid out for the same purpose, and the surplus of labor's wages and that of dividends and profits not thus expended, go to sustain further production directly, until they have been capitalized in the manner before mentioned. The whole result may be stated in four equations: Say, $\frac{9}{10}$ of labor's wages = prod-

ucts of other labor + capital consumed = x overstock; $\frac{1}{2}$ of dividends and profits = products of labor + capital unproductively consumed; $\frac{1}{10}$ labor's wages = capital in savings; remaining $\frac{1}{2}$ of dividends and profits = products consumed, which appear in labor and material capitalized in railroads, municipal improvements, mills, mortgages, real estate, and other investments. The figures are conjectural, but as commerce consists of the indirect exchange of commodities, there result from the equations enormous investments following the consumption of the wheat, provisions, and other absolute as well as relative necessaries of life raised in price by the resulting overproduction in excess of commerce. Rectification of the excess is allowing commerce to gain upon production until equilibrium is restored. But which country suffers most? England or the United States? The latter, undoubtedly; for when production was most costly, when we were ready to purchase railroad iron at enormous prices, and pay for it in debentures at equally low prices, we built our railroads: the English producers have the first lien, and second incumbrancers and stockholders in the United States must stand in the rear. We are the commercial tributaries of England: she has rapidly accumulated wealth within the last ten years, but the income, like that from all production on credit carried to excess, is very uncertain, and she must be rapidly losing. France is a producer of those luxuries the consumption of which falls off first of all kinds in hard times. The producers of those luxuries are suffering because their customers everywhere are suffering. The true remedy for the United States is a sound currency, not convertible merely, but limited, according to the unit theory. I have demonstrated the falsity of the commodity theory by a *reductio ad absurdum*, that of the combined commodity and conventional theory by its contradictions, and the truth of the unit theory in all the modes stated. The absurdities of the theory that banks deal in credit like that of merchants is now apparent to you: merchants buy goods of each other on time and pay in cash at its expiration, and thus instead of putting money in circulation in excess of the

actual exchanges of commodities, they economize it and only raise the price of the particular goods by furnishing a market for them. The producers, adventurers, speculators, and laborers who buy most of the goods they consume, while they are making cloth, iron, and lumber, and constructing railroads, mills, factories, shops, rows of city houses, and warehouses in excess of actual business and population, pay borrowed money and (what results from the use of the borrowed money, and amounts to the same thing) money received in the shape of dividends and profits, before any of the results have found buyers or have become productive. So far as these results appear in the shape of commodities which must in time find buyers and actual consumers who will require them, the crisis is comparatively light, and there is less industrial although there is a great deal of mercantile and banking disturbance. In those commodities which are essential to commerce, and rank next in importance to absolute necessaries, rectification of excess takes place the soonest; for all excess is relative. Take half the excess and place it to the credit of defect, and you have equilibrium. The slowest recovery is where the commodities or goods produced have gone like iron, lumber, timber, etc., into railroads and rolling stock, houses and warehouses, municipal and other improvements, and into lands and mortgages, in excess of actual commerce and population. All this excess must be paid for slowly by the actual exchange of commodities, which is none other than that of producing consumers who have already sold commodities and can therefore pay with cash. This comes with population and improvement of land, and we must take into account the labor which supplies our markets from abroad, as well as that at home. Costly excess could never have proceeded so far without borrowed money. And what borrowed money supplied the materials and the labor which went into what is called fixed capital? Borrowed money through bank loans in the first instance, undoubtedly, for workmen must have their wages in cash and producers their profits in cash so far as needed in order to live. Mathematically stated, therefore, we have

in the foregoing equations borrowed money exchanged for goods consumed, the results of which exchange and consumption have never yet gone into a second series of equations to complete the indirect exchange, which therefore can never be brought about until the overstock and the capitalized results are in part sold, and the deficit made up by future production and sales. Commercially stated, future production and the commerce arising from it, as well as the commerce arising out of the present overstock, must eventually pay the debt. The debt could never have risen to such figures had not the banks in effect loaned commodities by loaning abstract units of money: a mercantile sale of commodities on credit by merchants to merchants or producers could not have caused the rise. The rise came as explained by the equations, from expanding the circulation of money in excess of its contraction: there were more buyers than sellers of commodities, not upon credit certainly (as the credit theory affirms), because all bought with cash. The credit consisted, not in buying goods upon credit, but in producing and holding the product upon credit through the aid of bank loans. It was undoubtedly an economical debt, for the producers ran in debt to the exchanges, and, if able, they must pay it to the exchanges. This payment will not *result* from paying the banks, but will *cause* the latter payment to take place. The present fall in prices, then, results in an economical sense from the falling off of production, for that leads to diminished consumption, and the latter to diminished demand: while in a monetary sense diminished production puts less money in the hand of labor and capital, in the shape of wages and profits, and hence in proportion to actual exchange of commodities indirectly bartered through money, there is less money in circulation than before, and lower prices. If prices were always steady, it would not be material whether the units were multiplied or divided by two, because in international exchanges merchandise, although valued and sold in the foreign, is afterwards valued and sold in the domestic market. It is the fall in prices following overproduction which causes loss and bankruptcy to manu-

facturers and merchants. This fall is called shrinkage in values. Here we can see the vast advantage England has over the United States. Her accumulations by way of income have been enormous within the last ten years. Our raw material and wheat, provisions and petroleum, although some of them have been high, have remained comparatively steady, but her and our railroad iron has fallen nearly one half in price. We really could not afford to pay her more than two thirds of the prices she actually received, nor could we afford to sell our debentures at such low figures. She has gained enormously while supplying us as well as other countries, but the falling off in her production through the exhaustion of her customers must soon tell upon her income. In conclusion, we must not be misunderstood. We do not mean to say that it is entirely practicable to regulate banking reserve throughout the United States, but we do say that in the absence of deposits, bank-notes could be made, through a consolidated reserve, to furnish, in company with a comparatively small amount of metal, nearly as steady a circulation as that of France, and the demonstration of this fact which we have furnished is of the utmost importance: that it will ultimately be applied as far as practicable to all bank loans we cannot doubt. The chief advantage to be derived from metallic in contradistinction to all other money is that of limitation and consequent steadiness, whatever may be affirmed or denied, and whether or not it shall continue to be called by scientists a commodity and therefore possessed of real mercantile value, while all other kinds of money are called debts and choses in action, without any real value. We do not say that the general adoption of the unit theory, with a perfect limitation of bank loans, would regulate completely and keep in harmony all the results of labor, but we are certain that it would mitigate the effect of all disturbances of that harmony, by making them short in duration and comparatively mild in character. The unit theory of money, which has been established by demonstration in this debate, can never be introduced of course until a large majority of economists adopt and teach it.

O. P. E. The great difficulty of establishing it lies in the fact that under coinage at bullion values, bullion and coin correspond in value. That this is only a coincidence; that unless all coins are regarded as tokens none ought to be so regarded in point of science; that bullion is not sold like other commodities, and in fact not really sold at all, are overlooked.

N. S. B. That is true. There is really no such thing as a sale of gold or silver bullion, where unit and bullion values correspond, and hence there can be no such thing as a sale at all. We may well say, therefore, that gold is never sold as bullion, whether assayed or not. It is merely exchanged: units of weight in bullion are exchanged for units of weight in gold coin, or even for paper. It is an exchange and not a sale, and it would be the same if there were no mints: wedges and ingots might furnish the units or they might be moulded or hammered into some other form: in all cases they would exchange as units. Were it not for the illusion created by convertibility, which is only an exchange (for such is redemption) the long-continued use of bank-notes ought to have given rise to a clear perception of the fact that all paper money, convertible as well as inconvertible, is but a series of abstract units, numbered from one upwards, and that valuing power stands inversely to numbers. Dollar is an abstract unit, and is only the African macoute (which was an abstract unit of comparison and valuation in barter) localized and limited. In the African exchange mentioned by Montesquieu the macoutes were simply abstract numbers, — 1, 2, 3, etc. They were the only units of comparison and valuation by which to state the value of one commodity as reckoned in another, to be exchanged for it. If one commodity valued in the other were assumed to be 2, the latter valued in the former might be 3, and values would stand respectively as 2 to 3 and 3 to 2. There could be no valuation without two commodities, for one commodity represented by 2, and another by 3, considered independently and separately, are mere abstractions, but compared, give rise to proportion, valuation, and the completion of the equa-

tion of exchange, by mutual deliveries. Precisely so is it with what we call money. The introduction of shells, teeth of animals, etc., as localized macoutes, pounds, or dollars, was the contrivance of savages, but it demonstrated the ability of savages to apply abstract units to the purposes of exchange, for the shells and teeth had no other use. The introduction of silver and gold brought the process of exchange to perfection, but could not make the unit less abstract than before. As soon as the idea of direct barter by means of abstract but not localized units developed into that of indirect barter, the simple equation of exchange was mentally converted into two equations through the masterly contrivance of making one side of each of the equations abstract. Had contrivance stopped there it would have produced no fruit, for how could abstract units alone be accepted as an equivalent for a commodity? But masterly contrivance did not stop here: it localized and limited the unit in shells and teeth, and as society developed sufficiently to mine for the precious metals, it localized and limited the unit in these, and here it rested, because its work was perfect. The complex development of banking followed naturally, and paper money and "the credit" money of the economists followed also. To apply the term "credit" to one kind of money more than to another is not warranted. Science shows us, if we can get rid of fallacies, that all money is necessarily based on credit: the bullion market proves this.

The fallacy of supposing money to have real mercantile value (the impossibility of which I have just demonstrated) has shown itself in the nature of the objections to the coinage of silver. The objections are all based upon the erroneous *idea* that silver when coined possesses a mercantile, while the objections of true science are founded upon the *fact* that it possesses no such value. You can now by four simple equations prove this fact to your pupils and readers, as well as the fact that production on credit is the origin of all deposits in excess of reserve, and of banking and commercial crises, while real sales of commodities diminish deposits instead of creating them; and that limitation of such

production is the first and most important object of bank reserve, which, in order to effect that limitation, must be made to limit bank loans short of a crisis. Your equations may be stated to your pupils and readers thus: p (dollars of wages and profits borrowed from bank) $= x$ yards of cloth as the result: 10 units of wheat $=$ 10 units (dollars borrowed from bank and exchanged for the wheat): 10 units (dollars received in the last preceding equation) $= x$ yards cloth purchased with the money. Here the cloth is produced by the exchange of abstract units for labor: the wheat is also exchanged for abstract units, which are in the last equation exchanged for the cloth and enable the manufacturer to pay so much upon his debt in bank. The purchase of the wheat created bank debt, but it will soon give rise to a fourth equation: 10 units (wheat) $=$ 10 units (dollars received on sale to a consumer). The last equation pays bank debt due by the buyer of the wheat: the exchanges are all made by abstract units, and the latter being paid by consumers, at once reduce deposits.

Such a system as we have proposed will limit municipal extravagance and taxation more effectually than anything else, because it limits the power of borrowing, although constitutional limitations ought to be established also.

Simplification of the revenue system, not only of the general government but also of the states, is likewise demanded. The power of protection is very limited, because the protection of one producer lessens the consuming power of all producers. What the American producer most needs and ought to have, is the protection he has never yet enjoyed, — that of a sound currency.

C. B. C. Our debate is about to close, and as it is to be published, people who read it may wonder why that class of bullionists who believe that metallic money has a mercantile value independently of all convention, measured by the labor it cost, has not been directly represented in this debate.

N. S. B. It is questionable whether any one can be found who will admit the correctness of the conclusions to which those premises lead, after they are stated to him, although

he may in terms agree in advance to adopt them. Such a bullionist, however, is logical in framing his premises, because they are not contradictory, as are those of the former school of O. P. E., — the present prevailing school of economists. They affirm that money has conventional value, and at the same time real value as a commodity. This is a contradiction in terms, and when they are met by the conclusions to which the mercantile part of their double hypothesis leads them, they endeavor to parry their force by setting against them the conclusions to which the conventional or unit theory lead. In like manner when they are met by the conclusions to which the conventional or unit part of their hypothesis lead, they set against them those of the mercantile part of it.

This is the cause which has prolonged the debate. O. P. E. is an able writer and logician. He has parried the force of my arguments from so many different angles that it has required a long time for us to come to definite terms, or, as special pleaders say, to join issue; but with such a bullionist as you speak of issue is joined at once. His premises are immediately traversed, because they are not contradictory. He has eliminated the conventional or unit theory from his hypothesis, and stands squarely upon real value. It requires but a few plain facts of history, and one monetary fact of universal import, to prove that the hypothesis is false. Savages who have discovered the precious metals, and even used them, but not as a medium of exchange, have never attached any peculiar value to them over and above other things, and dispose of them readily: to them they are not *precious*. The monetary fact is, that they have really no mercantile value whatever except when reckoned in each other. It is utterly impossible for them to have such value so long as they are used as money. Even units of bullion are at the same time units of money. Bullion is not really sold as commodity, although we have said in terms to the contrary, in this debate, and my friend has used similar language in his book. It is the language of the market, but it is not true. The bullion dealer in London who buys gold

bullion with gold sovereigns or bank-notes, merely exchanges one localized unit of money for another. Coinage is only government verification and certification in a convenient and artistic form. If there were no mints, prominent merchants and bankers would certify, and all who might choose would verify. The case is the same with silver, although barter rates between these metals, as material for the units, has changed very much by stopping free coinage of silver. Gold and silver have no mercantile value except when reckoned in each other for the purpose of determining what shall be the weight of their respective money units, and this reckoning must be made in the abstract units of barter. If we call one ounce of gold 18, we may call one ounce of silver 1. Barter values then stand as 18 to 1. We may give these abstract units a name, and call them macoutes. Barter values will then stand as 18 macoutes to 1 macoute. Again, we may call them dollars, and they will stand as 18 dollars to 1 dollar. The precious metals are bartered only when they are reckoned in each other and exchanged, but this barter exchange may be called a sale: in other words, silver is sold for gold, and gold is sold for silver. For no other purpose is precious bullion sold, and it is bartered or sold (whichever term we choose to use) in this case only because the barter rate must be fixed before both metals can be used as money.

O. P. E. Why do you call the exchange between the metals barter, or sale, indifferently? How can a barter exchange be an exchange by sale according to the principles we have established in this debate?

N. S. B. It is because the usual complex elements of barter relation are first of all tacitly eliminated from the equation of barter exchange, and relations of weight alone considered, that the exchange can be called a sale. It is in reality but an exchange. The sale of gold bullion for sovereigns being, as I have just shown, an exchange, so the sale of silver bullion for sovereigns is but an exchange, differing from the other only in this, that gold is exchanged for gold of equal weight, with possibly a slight premium, and silver for gold after computing relations of weight, which

are made from time to time. Because money of all kinds, whether paper or metal, is but a process or contrivance for the exchange of commodities by the conversion of direct into indirect barter, and gold and silver have for ages been in use as material to localize and limit the abstract units of valuation, and thus at the same time convert them into conventional equivalents in the two equations of exchange, which have taken the place of the single one, it takes a long time to change by means of annual product to any important extent the ratios of the total of abstract units furnished by either metal to the total of the exchanges in which it is employed. A universal and immediate abandonment of either metal, although abstractly possible, is practically impossible. If we call $15\frac{1}{2}$ to 1 the standard relation of gold to silver, and assume that the average of all changes in that relation through the acts of Germany and the Latin Union, in respect to the coinage of gold and silver, have changed it to 18 to 1, or fifteen per cent., then undoubtedly there has been equal change in both metals in respect to commercial demand, and commerce lost on the one hand, and gained on the other. One must have gained as much as the other has lost. But is there any mercantile gain on the part of gold, or mercantile loss on the part of silver? Is there anything more than variation from an abstract and imaginary point? Is that point as real in a mercantile point of view as the entity or quiddity of the schoolmen? If gold has risen seven and one half per cent. in mercantile value, the miner and the bullion dealer ought to trade upon the rise, but they can in reality no more grasp it than they can quiddity. On the other hand, if silver has fallen from an imaginary point seven and one half per cent. in mercantile value, the miner must have lost upon his silver as much as he has gained in gold; but it is impossible to measure bullion values from an imaginary point: there must be something real to measure by. When gold is the "standard," as in England, the change in silver is a fall of silver; where silver is the standard, the change is a rise of gold. But how, then, are the miner and the bullion dealer

and buyers of bullion from the latter affected by the change in relations by weight of the two metals? In a monetary point of view the gain in gold has exactly balanced the loss in silver; the miner has exchanged gold money uncoined for gold money coined, and there has been no rise of prices as yet through the change in the relations of metallic weight. Prices have fallen in Europe, but this fall has no relation to gold and silver: prices have fallen in consequence of the "existing depression." The miner has gained nothing then, and the bullion dealer has gained nothing in a mercantile point of view. Such must also be the case with the banker or merchant who gives his check for gold bullion to the dealer, and sends the bullion to the mint. But although the miner has surely lost on his silver, because 15½ to 1 being the former, and 18 to 1 the present standard relation, he must give fifteen per cent. more silver than formerly to obtain a like number of gold units, he has gained nothing as yet on gold although he has lost on silver. The bullion dealer is moreover only an exchange broker, and when he exchanges silver for gold, he must in the exchange make all his profits in gold money. But suppose the miner takes his gold and silver to a bullion dealer in a country where silver is standard. He has lost nothing upon his silver: his silver is worth as much as ever to use in the exchanges of that country, while his gold has gained nothing as money to use in the exchanges of countries where gold is standard. Whether silver has fallen or gold risen depends then entirely upon which one is "standard" to the other, and the whole question is merely one of abstract numbers. But it is impossible that of two things, one should rise and the other fall equally in respect to each other at the same time; it is a contradiction in terms to affirm it. It is certain, nevertheless, that there has been both a rise and a fall. There is but one solution of the difficulty. The rise and fall must be considered what they really are, — a change of relations between masses of metal. But what change, and in what masses? Not a change in the purchasing power of masses distributed everywhere by commerce, and used as valuing

and paying, and therefore conventional units, in the vast number of exchanges going on throughout the world. I have shown that there has been and as yet can be no change in this respect. Where and what, then, is the change? It is in the ratios of commercial demand to supply. Refusing free coinage to silver, and retaining it for gold, in Germany and the territory of the Latin Union, while the product of either metal has not changed, and precipitating on the market large masses of silver from Germany, have been the chief agents in producing the results we have been and are now witnessing. The demand for gold has risen seven and one half per cent. in excess of supply, and the supply of silver has risen seven and one half per cent. in excess of demand. The rise in demand on the one hand is exactly equal to the rise in supply on the other, and they can be stated with almost mathematical accuracy. The demand on the one hand, and the supply on the other, can only be called commercial on the abstract or money side: they relate directly to buying and only indirectly to selling. The bullion dealer being really an exchange broker, the question at once arises: What can he and those he exchanges with, after he has bought gold bullion, do with it? The answer is, that both he and they can only exchange it for other money, or buy merchandise with it; they can never sell it. The profits of the dealer must then consist entirely of a small premium he will make by an exchange of the uncoined for coined money. Gold has not risen as a commodity, for if it had, an increase of demand seven and one half per cent. in excess of supply would at once carry up the price, as merchandise, above these figures, to fall back to them afterwards. The rise would be manifest to the buyer as well as to the seller of bullion. In point of fact, however, there is no rise, because rise or fall cannot be predicated of conventional values and abstract units. There is neither loss nor gain to any one: what is going on is merely a transfer of conventional value from silver to gold, in their valuing relation to commodities or merchandise in general; and this change is slow, and the change in the ratios of metallic product of silver to that of

gold is also slow. Possibly, there may be no change in this respect at all: certainly there is no material change for the present. All that the bullion dealer, still retaining his character of exchange broker, can do, then, with his silver after he has exchanged gold for it with the miner, and all that those with whom he exchanges it back for gold again can do with it if they live in a country where gold is the standard, is to exchange it for other (gold) money, by giving fifteen per cent. more silver than formerly, or buy with it in those markets where silver is still standard, without losing a dollar. Why, then, should they give fifteen per cent. more in exchange for gold? Because, after losing seven and one half per cent. of the total commerce in which it has hitherto been employed, silver is still in excess of the total commerce which is left it through the causes above mentioned. This excess, added to the seven and one half per cent. actually lost, makes up the fifteen per cent. But all this, so far as actual commerce and prices are concerned, is not only in the future, but it is in the *possible* and uncertain future. Gold and silver in actual use as money in commerce may never change their relations to prices at all. What has caused the falling off in barter exchange between the metals on the part of silver, then, is the fact that demand and supply have changed while the ratios of metallic product have continued unchanged, and coined silver has also been largely exchanged for gold. If metallic production and mint regulations continue, gold must in the end gain and silver lose seven and one half per cent. in their general relation to units of merchandise. As it is, silver *supply* (not silver at large) has lost as compared with gold seven and one half per cent. of the commercial demand; and because this loss cannot be immediately distributed through commerce, where silver is still the standard, but on the contrary requires a long time, and inasmuch as the loss is conventional and temporary, and relates, therefore, to buying and not selling, silver supply must submit to an immediate additional loss of seven and one half per cent. more as compared with gold, to be made up to it in the future. The demand for gold has increased seven and one half per cent., but it is an entirely

conventional demand involving only the transfer of purchasing power from silver to gold. Gold is now wanted where both silver and gold, or silver only, were wanted before, and as fast as silver leaves or falls short in circulation gold takes its place: there is as yet no rise in gold, nor is there any fall in silver as money. Silver product has thus lost seven and one half per cent. of its commerce, and is also left seven and one half per cent. in excess of its remaining commerce. Until it can distribute itself (should it continue the same) evenly with the commerce it still retains, the latter excess must continue. Until that time it continues a loser by fifteen per cent., whereas the new commerce which gold has gained is ready for all the gold product as fast as it can be obtained. But when silver product shall have distributed itself in harmony with commerce by a seven and one half per cent. gain in number of units relatively to that commerce, and therefore in prices, it will have made up seven and one half per cent. of its loss, and the ratio will change accordingly. In respect to the totals of commerce belonging so to speak to each metal, gold has risen and silver has fallen seven and one half per cent. Either a falling off of seven and one half per cent. in silver product in the future, or a gradual loss of seven and one half per cent. of purchasing power by an increase and gradual distribution of its units will ultimately restore the old ratio entirely. For any single nation to undertake at this time the feat of maintaining a "double standard," therefore, is folly. Only internationally can it be accomplished. Free coinage of both metals by one country only would in all probability drive out gold: possibly by one chance in a thousand the true ratio might be hit, and standard means the same thing, because it means relation by weight of either of the precious metals expressed in terms of the other. Because the effect of such a coinage must be to drive out gold on the one hand or silver on the other, — probably the former, — an arbitrary premium of exchange would be created, founded on no real values whenever bullion might be shipped, and this arbitrary rate would appear more or less, even short of what is called the shipping point of specie. But so far as

silver is concerned, product may fall off, and demand for commodity use may arise sufficiently to restore old rates very nearly without shipping much additional silver to the East.

O. P. E. What do you call the commodity demand?

N. S. B. The demand for gold and silver plate, watch cases, gold leaf, jewelry, etc. This demand is not brisk at this time, because the value of the units of metallic money is high in relation to those of real commodities. This makes metallic material high in price, if you reckon price in units of commodities at large. During our late civil war, when metallic money commanded a high premium, and even afterwards, there was a brisk demand for commodities manufactured out of the precious metals. When they have been converted by skilled labor into commodities they are in that character no longer exchanged for other metal, or used in buying; they are then sold and paid for in units of money, like all commodities. Labor has given them an additional but uncertain value, when reckoned in other commodities, and the reckoning is made by means of money. This is no exchange of money, for buyers and sellers fix the price of the metallic commodity in abstract units of money, and deliver accordingly. As to the universal desire to possess the precious metals which our bullionist is supposed to insist on, it did not precede, it followed their general adoption for monetary uses. They are precious, because they are conventionally money as soon as mined, and for that reason only. The demand for gold and silver as money has no reference to any particular quantity of metal. If the production of one metal (silver) should increase, and that of another (gold) decrease, in reference to commerce, the demand will change accordingly for a time, and the barter rates of exchange between the metals will adjust themselves in harmony. This is exactly what has happened in reference to silver and gold. Calling the change in barter relation between the metals, which has occurred of late, fifteen per cent., one half of it is rise of demand for gold units, and the other half fall of demand for silver units. To state the relation in terms of supply, the supply of gold units in reference to com-

merce is short seven and one half per cent., and that of silver in excess seven and one half per cent. Ultimately, however, the demand for gold will adjust itself to the decrease in the supply of gold and the increase in the supply of silver; demand and decreased supply of gold on the one hand will be equal to demand and increased supply of silver on the other. Eliminating demand from each side of the equation we have decreased supply of gold, in reference to its commerce, equal to increased supply of silver, in reference to its commerce; in other words, the two ratios are equal. Quantity of metal, therefore, and consequently cost of labor in mining, have no reference to the value of metal in exchange for commodities, because the value of the metal is conventional. Each kind of metal is wanted to furnish units of valuation, purchase, and payment, and quantity of metal has no reference to this object, except for the purpose of duly limiting and distributing the units. The bullionist of the strict school of Smith and Ricardo had no need of a representation, therefore, in this debate: the demonstration which proves his premises false is short, and it was given in answering you: to answer you effectually required a long time and some repetition, for the reasons already given.

O. P. E. Before entering into this debate I considered the subject of money one of the simplest and plainest in the world, as all our economists do, but it is in reality one of the most complex. When fully understood I think it ought to lead to correct ideas of production and exchange. If your demonstration is correct, it seems to me that miners and bullion dealers are not to be seriously affected one way or the other, as a class, and the change in purchasing power of silver and gold must be so slow that even debtors and creditors cannot gain or lose appreciably, even if metallic production continues the same hereafter for each metal: it must be a slow transfer of purchasing power to gold until it has increased seven and one half per cent., and a slow loss of purchasing power on the part of silver, until the loss reaches a total of seven and one half per cent.; or possibly there may be a gradual gain in gold product and a gradual loss in sil-

ver product until gain and loss amount each to seven and one half per cent. No one, therefore, suffers loss, and no one gains. It is taking away seven and one half per cent. of conventional value from silver and gradually carrying it over to gold, or effecting substantially the same result by a relative change of seven and one half per cent. in each kind of metallic product. Does this statement embrace all possible change of relations between the precious metals?

N. S. B. No; not only may a fall of seven and one half per cent. in purchasing power on the part of silver be accompanied by a rise of seven and one half per cent. in respect to gold, but on the other hand a gain of seven and one half per cent. in purchasing power on the part of silver may be accompanied by a fall of seven and one half per cent. in respect to gold. The latter change of purchasing power, as well as both the changes you refer to, would carry back gold and silver from the relation expressed by the ratio of 18 to 1 to the old one of 15½ to 1. This whole subject of the relations of gold to silver or silver to gold becomes thus a mere question of mathematical proportion between intangible units and masses of bullion in equations of exchange. Units on the negative side in equations of exchange between buyers and sellers go to the positive, and units on the positive side in such equations go to the negative side, in equations of relation between the precious metals. Gain on one side is necessarily loss upon the other, because purchasing power loses as the abstract money units of valuation increase, and gains as they decrease. Should silver product and mint regulations continue the same, — waiving for the present those of the United States, and still calling the average change in the relations of gold to silver a rise of fifteen per cent., — as soon as the whole mass of silver coin is increased in consequence seven and one half per cent. in relation to commodities, the purchasing power of silver will then have fallen seven and one half per cent.; but because the units of silver money have thus been increased seven and one half per cent. on the average in all equations of exchange between buyers and sellers, the demand for silver will then have

gained all it has lost, and silver must rise in relation to gold seven and one half per cent.: it must then gain in its relation to gold as much as it has lost in its relation to commodities. Again, gold — product remaining the same — will have lost in its relation to commodities seven and one half per cent. of its units: the units have, therefore, gained seven and one half per cent. each in purchasing power, and the supply of gold is thus made equal to the demand. The demand for gold was at first seven and one half per cent. in excess of supply, but a rise of seven and one half per cent. (gain) in purchasing power has brought equilibrium between demand and supply. Gold, therefore, in its relation to silver must have fallen as much as it has risen in relation to commodities. Rise of one precious metal in relation to commodities is fall in relation to the other precious metal. Neither two positives nor two negatives, but only one positive and one negative, can restore equilibrium, so long as metallic production continues the same as heretofore. Loss of silver in relation to commodities is gain in its relation to gold, and gain of gold in relation to commodities is loss in relation to silver. The old bullion ratio of 15½ to 1 would in this case be ultimately restored by the equal rise of gold on the one hand and fall of silver on the other, in respect to commodities. But if silver — its product continuing the same — lose seven and one half per cent. in purchasing power, as above supposed, and rise seven and one half per cent. in consequence in relation to gold, should the product of gold meantime increase seven and one half per cent. this would at last balance the increased demand of seven and one half per cent. and gold will not have gained in purchasing power, nor will its old relation to silver have been changed by any movements of its own. But while it has thus been upon the average stationary towards silver, silver has risen in its relation to gold seven and one half per cent., and the general relation has changed from 1 to 18 back to 1 to 15½. But suppose the product of gold to gain fifteen instead of seven and one half per cent., gold will then have lost seven and one half per cent. of its former purchasing power, or precisely

the same as silver. Here are two negatives (losses) of seven and one half per cent. each in relation to commodities. Silver has risen towards gold seven and one half per cent. undoubtedly by a fall of seven and one half per cent. in purchasing power, and gold has lost the same percentage of purchasing power, and yet the old relation will be restored, although each has lost the same percentage of purchasing power in reference to commodities. But suppose silver to have fallen fifteen per cent. in product and therefore to have risen seven and one half per cent. in purchasing power, and gold to have also lost fifteen per cent. in product and therefore to have risen twenty-two and one half per cent. in purchasing power, the relations between gold and silver will remain unchanged, although both will have risen in relation to commodities. The meaning of this stated in terms of money is that the value of each metal is not only conventional, but units of weight, called money, furnish as counters intangible units in and by which to estimate the relations of commodities exchanged to each other, and stand in the character of tangible units as the equivalents of commodities on behalf of sellers who have received them for and in lieu of commodities, until and when they also in turn as buyers give them in exchange for commodities. In this view it may be said that they count and value as units in buying and selling, and meantime stand as conventional commodities in the hands of holders until and for the next exchange. While original barter is thus converted into indirect barter, when we look at money as counting out mere units, every equation of exchange may nevertheless be called barter in the sense that money may be considered as a conventional commodity, when it is not counting abstract units. There is a further reason for calling it barter with one conventional side in the equation, because the total of equations required to exchange commodities — the money or conventional sides eliminated — is the same it would be were direct barter practicable for civilized society; every buyer satisfies a want and every seller disposes of a surplus: the first half of commodity exchange is made by the seller, and the last

half completed by the buyer. It is mathematically certain, then, that money is not a commodity whose value is measured by the labor it cost, because it has no mercantile value whatever reckoned in commodities; it cannot be exchanged for commodities; commodities must be indirectly exchanged for each other by means of money. Selling without buying is a mere abstraction, and so is buying without selling: buying is essential as the complement of selling, and selling as the complement of buying. Nevertheless, the illusion that metallic money is a real commodity in the hands of holders is complete, although it cannot, unless conventionally and figuratively, be called such any more than spindles and looms can be called commodities of the same kind with cloth. The unit theory of money ought to be taught as matter of science and applied to bank loans and notes, and gold and silver and paper units in banking reserve, while the illusion of the commodity theory makes every holder of metallic money serve a useful purpose by holding and keeping until he is compelled to part with it.

O. P. E. Bullion value of gold reckoned in silver and bullion value of silver reckoned in gold seem to be but a mathematical statement of proportion between masses of metal by weight: considered by itself, it is but an abstract proportion.

N. S. B. That is true: it is but a register, in other words, of relative weights of masses; but what masses? Not the masses distributed by commerce, and found in treasuries, reserves, and pockets, but of the masses in the bullion markets. The meaning of the register is this: the quantities of gold and silver offered to bullion dealers and estimated as on hand ready to be offered stand, as we will suppose, to each other as 1 to 18; formerly they stood as 1 to 15½. If metallic production continues as at present, silver must fall and gold rise seven and one half per cent. in relation to commodities. The fall in silver in relation to commodities will result from its gradual distribution through commerce in quantities seven and one half per cent. greater than heretofore: prices will therefore rise seven and one half per cent. in time, and to maintain that rise seven and one half per cent.

more silver than heretofore will be needed, and that will absorb the present excess, by creating a necessity and therefore a demand for it. Silver will fall seven and one half per cent. in relation to commodities, but will necessarily rise seven and one half per cent. in relation to gold: its fall as to commodities will be its rise as to gold. On the other hand, the supply of gold falling short by seven and one half per cent. in respect to its commerce, prices will adjust themselves accordingly; gold will gain in reference to commodities as much as silver loses, and the former excess of demand for gold over and above supply, before this adjustment took place, will fall off, and gold will therefore fall seven and one half per cent. in its relation by mass to silver. This rise of silver towards gold, accompanying its fall in respect to commodities, amounting to seven and one half per cent., and the fall of gold towards silver for an opposite reason, being seven and one half per cent. more, and amounting in rise and fall to fifteen per cent., restore the old ratio of 1 to 15½. The elements of the change are seven and one half per cent. rise in the demand for silver *plus* seven and one half per cent. fall in the demand for gold, quantities remaining the same. The general relation of metallic product to commodities will always be the same: the particular relation will change by taking off seven and one half per cent. purchasing power from all the silver in the world and adding it to all the gold in the world, but it is a very slow change and hurts no one. Metallic production, however, will not continue the same. Silver will be used for manufacture more than gold; the product of silver will gain and that of gold rise in quantity: the supply of silver will fall gradually, and that of gold rise gradually; the particular relation of each of the metals to commerce will at last harmonize with the general relation, and the old value relation of 1 to 15½ will again be restored between the two metals. To speak with rigorous accuracy, it is because the precious metals have no mercantile value whatever, being used only to exchange commodities, that their relations of weight, of demand and supply, and of distribution both as money and manufactured commodity, can be stated with al-

most mathematical accuracy, speculative estimates eliminated. It is impossible to say what is their *actual* mass as money or commodity, but whatever it is, it is so vast that the ratio of annual product must be small, and continually growing smaller. Both metals ought, therefore, to be made money equally and everywhere, by free coinage at an agreed ratio. This would carry equal quantities into the mass of money and equal quantities into the mass of metallic commodities. Nothing can be steadier than metallic prices when metallic units move freely in circulation: under mere convertibility and ill-balanced production producers and merchants borrow of banks when the proportion of units of money to units of commodities consumed stands as 4 to 12, and when they pay it may stand as 3 or 2½ to 12; the difference is loss and bankruptcy: real values have not fallen because they have never risen; it is the ratio, not of the volume of all money, but of all money *in circulation* to goods. From every point of view we perceive limitation and steadiness to be the important objects sought by human contrivance in the use of metallic money, whether we admit it or not. Should metallic product of each kind continue the same, all silver coins might be made heavier and all gold coins lighter by seven and one half per cent. by means of recoinage before being paid out from government treasuries, and there would then be no change in the ratios of units of either kind of metal to commodities, and the old ratio of relation between the two kinds of bullion would be restored. This would amount to the same thing, however, as letting quantity of metal in units of each kind continue the same, because increase of the ratio of silver units and decrease in the ratio of gold units to commodities by seven and one half per cent. will be so slow that the whole gain of ratio on the one hand and loss of ratio on the other will be evenly apportioned to all future equations of exchange, and thus neutralized. The quotations of silver in London, then, in whatever form made, show how much — calling the gold unity — the silver unit ought to weigh, according to the respective ratios of demand and supply at this time, upon the assumption of their remaining

unchanged, in order to keep the ratios of the totals of each kind of units to commodities the same in the future as in the past; but as no change in the weight of the unit of either kind is likely to occur (except for "subsidiary" uses in the United States), the same result as to bullion will be brought about by balancing gain of ratio in silver by loss of ratio in gold in the manner already explained; gain on the one hand being equal to loss on the other, for the purpose of restoring the old ratio. The reason is, that the quotation of bullion rates is in reality a quotation of the rate of exchange between one kind of metallic money and another: bullion is simply money not coined. Coinage of silver by the United States, the possibilities of changes in mint regulations elsewhere, and increase of demand for commodities of silver material as "times improve," are elements which enter into bullion prices. They have been referred to in this debate and my friend refers to them in his work, but they have been excluded in answering the bullionist for the purpose of making the demonstration of the falsity of his premises complete. Money is a contrivance for measuring the relations of value, demand, and supply between labor and commodities, labor and capital, and commodities themselves by means of abstract units, and abstract units were resorted to because the relations could be expressed in no other terms. The localization of the abstract unit in the form of a definite portion of a commodity, and its limitation in point of numbers by the whole mass of the commodity, approached as near as possible to absolute invariability in furnishing units: variability belongs rather to the labor, commodities, and capital to be exchanged. But as all money, whatever its form, counts units only, the taking out even gold units by borrowers and buyers from banking reserve and their immediate return by sellers and depositors, furnish through bank loans an excess of exchanges unless some limit is fixed to such movements by the reserve itself. The manner of doing this has been already explained. Conventional value being given to the commodity used, solely for the purpose of making exchanges, all real value is eliminated by the very terms of

the convention, and the commodity is converted into mere units of weight from the very moment the weight of any particular portion of its mass is conventionally ascertained by coining. But inasmuch as miners and bullion holders cannot all conveniently coin, they exchange their uncoined bullion by weight for bullion coined at such premium as may be agreed upon.

I will close the debate with the following

SUMMARY.

The value of all money is conventional, and hence whatever is placed and accepted as money in equations of exchange between buyers and sellers is money itself. Deposits in excess of reserve arise from production on credit by the aid of bank loans, and they are retired and extinguished by a sale of the product in a cash market. A cash market is one in which commodities are indirectly exchanged by means of the units of money; it may be called the market of true commerce. In that market merchandise may be said to be indirectly bartered, because if out of all the exchanges between buyers and sellers the conventional units of money are eliminated, the merchandise stands exchanged. The origin of deposits in excess of reserve (leaving out unproductive consumption through improvident loans to non-producers) lies primarily in the wages of that labor whose products are not sold, and secondarily in the profits actually paid to capital on sales of those products to intermediate producers, who hold the products by the aid of bank loans, and who may or may not succeed in selling them in the market of true commerce. In wages paid with bank loans, therefore, lies the origin of banking, commercial, and industrial crises. Excessive production could not proceed as far as it does were it not for the apparent rise of prices which originates in the wages of labor expended in living. It is maintained for a long time by the profits of capital expended in like manner, as well as in the payment of wages to labor for the purpose of the same kind of production, and also in various other kinds of production more speculative and uncer-

tain. The very small amount of bank-notes and coin actually paid out by banks in clearing centres, as compared with what are called bank credits transferred by checks, are for the most part the very slight differences between the outgoing current, which pays wages and profits, and the incoming current, which results from sales in the markets of true commerce, when production is gaining. This increment is at first slight but gains constantly, and adds daily to the volume of bank debt in excess of reserve, which accumulates up to the time of a banking crisis, and then begins to contract, because the return current out of the market of true commerce (that of consumers) is then in excess of the outward one which supplies wages and profits. This subject of production on credit is not understood by economists or bankers. They suppose that bank loans are devoted to the purchase of merchandise, and, at the worst, cause overtrading; whereas the whole volume of deposits over and above reserve is the record of overproduction. They seem to have no conception of the forces at work, entirely ignoring the fact that labor is the source of all merchandise, that the origin of all bank debt in excess of reserve lies in the wages of labor paid with the proceeds of bank loans, and that if there were no prepayment of wages there could be none of profits until cash buyers appeared; and hence no banking crisis. The only remedy, therefore, lies in stopping loans at some designated ratio of reserve to bank debt, in accordance with Adam Smith's law, for the double purpose of checking production and preventing it from proceeding in excess of markets, and also in order to prevent any deception of the producers by the rise of prices.

The most important object of bank reserve is to maintain harmony of production. Extreme and one-sided views ought to be discarded, because they do not embrace all the facts upon which a theory ought to be founded. The doctrine of the free traders is sound, because trade between nations ought, as a general proposition, to be as free as possible; the doctrine of the protectionists is sound, because the producers of the United States ought to produce to their

utmost capacity, so long as they can produce in harmony. No abstract theory contains the whole truth. Surely the furnaces and forges of the United States can produce all the iron needed as fast as it can be laid down with advantage. It had been better to have constructed railroads more slowly for the sake of saving some of the enormous tribute we are paying England at this time. It is doubtful whether the producers of the United States need any protection save that of a sound monetary system: harmony of production, however, is essential under all circumstances. If the United States had the benefit of a sound currency, and production were going on harmoniously in all directions, the country could receive no benefit from large quantities of iron or cloth cheapened by a crisis in English production, and thrown upon our markets. Free traders and protectionists have been disputing for a long time without knowing that the most important element of protection lies in a sound monetary system, the first principles of which, so far as they are concerned, are yet to be learned. The tariff question has little practical importance save as to revenue. The word commodity ought to be banished from economical science, and give way to articles of first necessity and articles of second necessity, or similar terms. Capital might be divided into productive and non-productive. It is as reasonable to call a railroad or railroad shares commodities as to call the iron rails which are laid upon the tracks such. The earth and ballast which make the road-beds might as reasonably be called commodities as railroad ties and the lumber which enters into rolling stock. That money should be called a commodity is still more absurd, for reasons already given.

The most important function of metallic money where banks exist, and furnish a large portion of the circulation through loans, is that of limitation of bank loans and thereby of production on credit. The true meaning of this limitation defined in the simplest terms where metallic money constitutes the reserve, is to stop loans whenever the number of metallic units in the reserve stands at a certain ratio to

the units of bank debt due depositors, and to make no loans which will carry the reserve below that ratio. The reason why steadiness of that ratio will give steadiness of loans and consequently of production, is that while bank loans are nearly all devoted to purposes of production, the persistence of the mercantile theory as matter of opinion, and of national habits and other complex elements, maintain — banking aside — a very great degree of steadiness in the purchasing power of the units of the precious metals. If we assume that the United States have heretofore taken upon the average six, England twelve, and France eighteen millions of dollars, the changes in the ratios of these several totals to total average metallic production will be slow and proportioned to increase or decrease of commerce, and should commerce be stationary there will be no change at all. Moreover, in consequence of the persistence of national habits and slow industrial changes in those countries which take most of the metallic product, there is no danger of any sudden expansion of the number of metallic units put in circulation by means of loans. All the complex elements before referred to will continue to keep a steady circulation where metallic units constitute the whole circulation or a definite portion of it: if a definite ratio of metallic reserve to bank debt be adopted as a minimum ratio below which no loans can be made in any bank, then metallic units will upon the average constitute a definite portion of all units of money in company with bank-notes, and maintain at all times a uniform rate of economy of metal. Metal cannot perform its most useful function in the way of maintaining steady production and steady prices where bank reserve is continually fluctuating. The cause of banking, commercial, and industrial crises has been shown very clearly in this debate. It is not the uncertain use of what is called credit in buying what has already been produced, but in producing on credit by means of bank loans.

Articles of first necessity cannot be overproduced, and are never in advance of population; articles of second necessity may be and are overproduced. These articles may

properly be called commodities; they are soon consumed, and must be continually produced. The exchange of these articles is ordinary commerce. Railroads, city and village houses and warehouses may be called the accessories of commerce. To produce articles of second necessity by the aid of bank loans for a long time, in excess of articles of first necessity, must certainly lead to a commercial crisis, but to proceed still farther, and by the aid of bank loans and profits declared in advance of cash sales build up the accessories of commerce largely in excess of commerce itself, makes the crisis not only commercial but national.

Had overproduction been confined to articles of second necessity, like cloth, clothing, boots and shoes, etc., it would have been short. New England suffers less than Pennsylvania and the cities and towns of the West. But the artificial in excess of natural inequalities of wealth (the latter of which are essential to maintain civilization) are an evil which a sound monetary system will also help to diminish. The modern tendency is to increase the efficiency of capital by consolidations in the hands of corporations. The present danger is that of loss of individualism through the necessity of giving the power of management to a few. This is not communism as it exists in idea, but it is what communism, if practically carried out, would end in. This tendency is already too strong, and ought to be counteracted by the encouragement of individualism, for by the latter has human progress thus far been accomplished. It is absurd to suppose that farther progress will result from systematically abandoning the motive power which has thus far sustained it. The principle of individualism is injuriously affected by a variable currency, which bankrupts so many and concentrates their capital in a few hands. Socially as well as politically, nothing is more conservative than a sound currency.

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